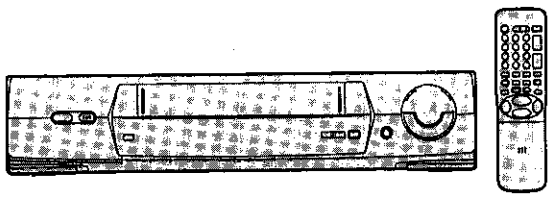
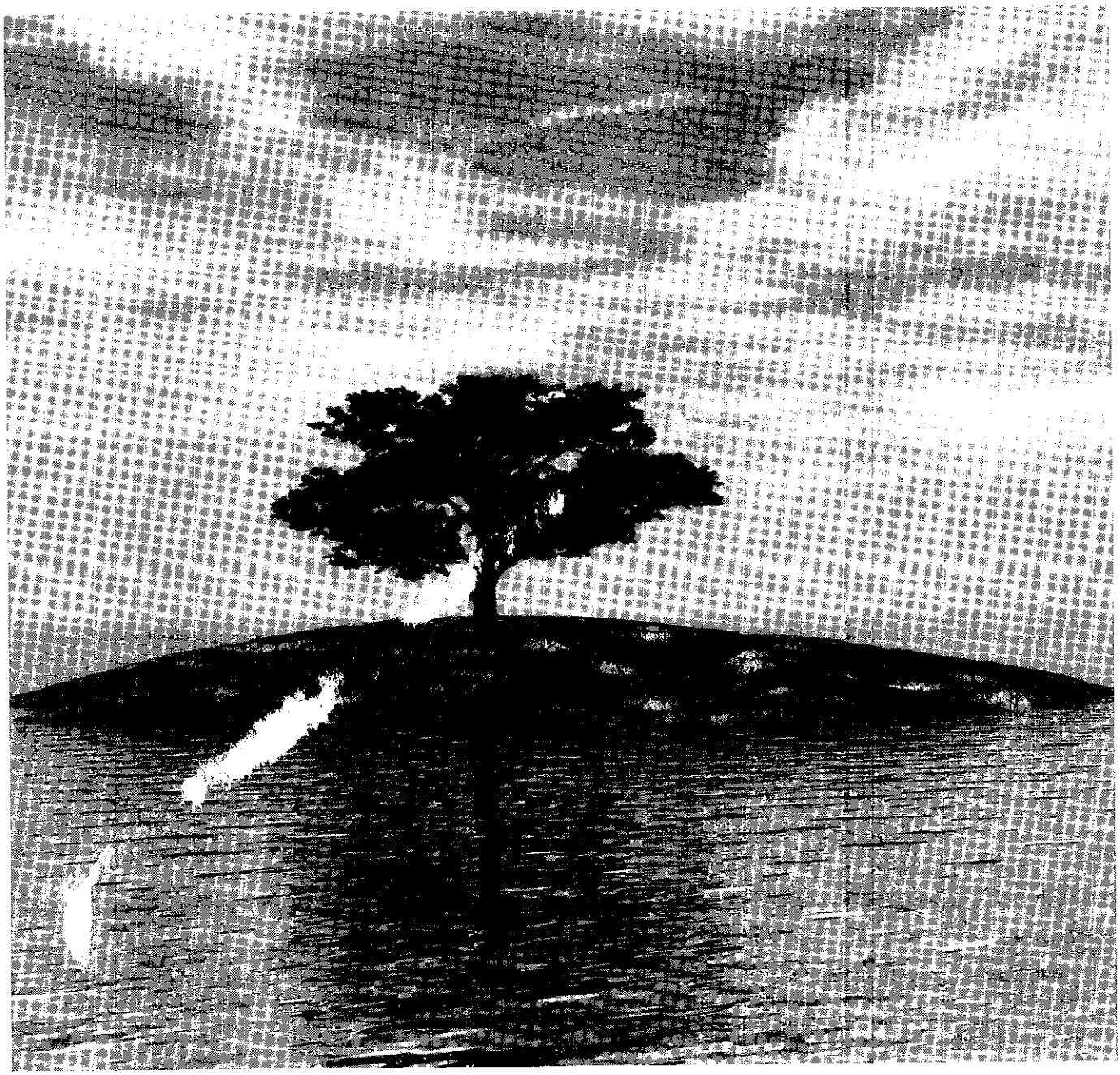
Panasonic



Video Cassette Recorder

# NV-HD640B
# NV-HD640BL

Operating Instructions



VIDEOPlus+®  Q-Link

VHS PAL  SUPER DRIVE MULTI-INTELLIGENT CONTROL II

VQT7900

Before attempting to connect, operate or adjust this product, please read these instructions completely.

# Dear Customer

May we take this opportunity to thank you for purchasing this Panasonic Video Cassette Recorder.
We would particularly advise that you carefully study the Operating Instructions before attempting to operate the unit and that you note the listed precautions.

**As this equipment gets hot during use, operate it in a well ventilated place; do not install this equipment in a confined space such as a book case or similar unit.**

## Caution for AC Mains Lead

### For your safety please read the following text carefully

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-amperes and it is approved by ASTA or BSI to BS 1362.
Check for the ASTA mark Ⓐ or the BSI mark ⓑ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

### IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚.

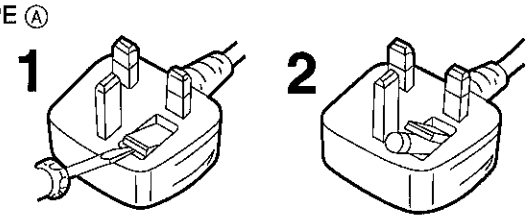
### How to replace the Fuse

- There are two types of the AC mains lead assembly: Ⓐ and Ⓑ as shown below.

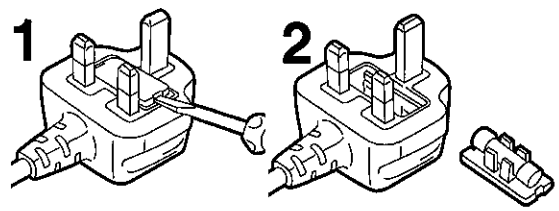
**1** Open the fuse compartment with a screwdriver.

**2** Replace the fuse and fuse cover.

TYPE Ⓐ




TYPE Ⓑ




### IMPORTANT

**Your attention is drawn to the fact that the recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.**

### WARNING

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.**

### FOR YOUR SAFETY

■ **DO NOT REMOVE OUTER COVER.**
To prevent electric shock, do not remove cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

**VIDEO Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The VIDEO Plus+ system is manufactured under license from Gemstar Development Corporation.**

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# Checking the Accessories/ Preparing the Remote Control

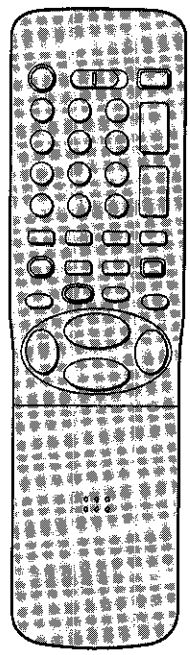
**Check that you have the accessories shown below** ☑.

☐ **Operating Instructions**
VQT7900

☐ **Quick Start Guide**
VQC3382
(Only for NV-HD640B)

☐ **Guarantee Card**

☐ **Remote Control**
VEQ2225

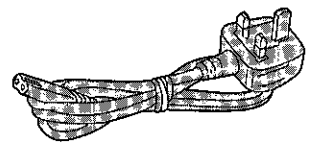


☐ **Batteries for the Remote Control**
R6 size

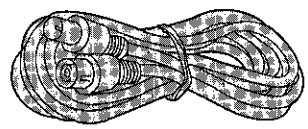
- The service life of the batteries is approximately 1 year. However, it varies considerably depending on the frequency of use.
- When they are exhausted, replace them with two AA, UM3, or R6 size batteries.

☐ **AC Mains cable**
VJA0733-C, VJA0940 or VJA1022

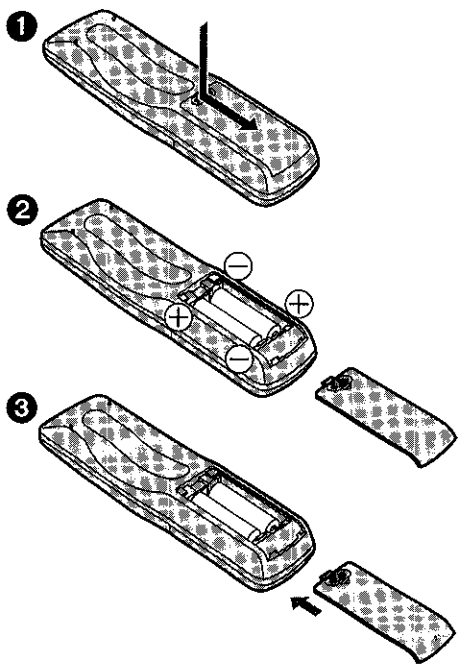
- When you replace the fuse, refer to page 2.



☐ **RF Coaxial cable to connect VCR and TV**
VJA0728-A or VJA0963-A



## Inserting Remote Control Batteries



❶ Slide off the battery cover.

❷ Insert the batteries with the polarity (⊕ and ⊖) correctly aligned.

❸ Replace the battery cover.

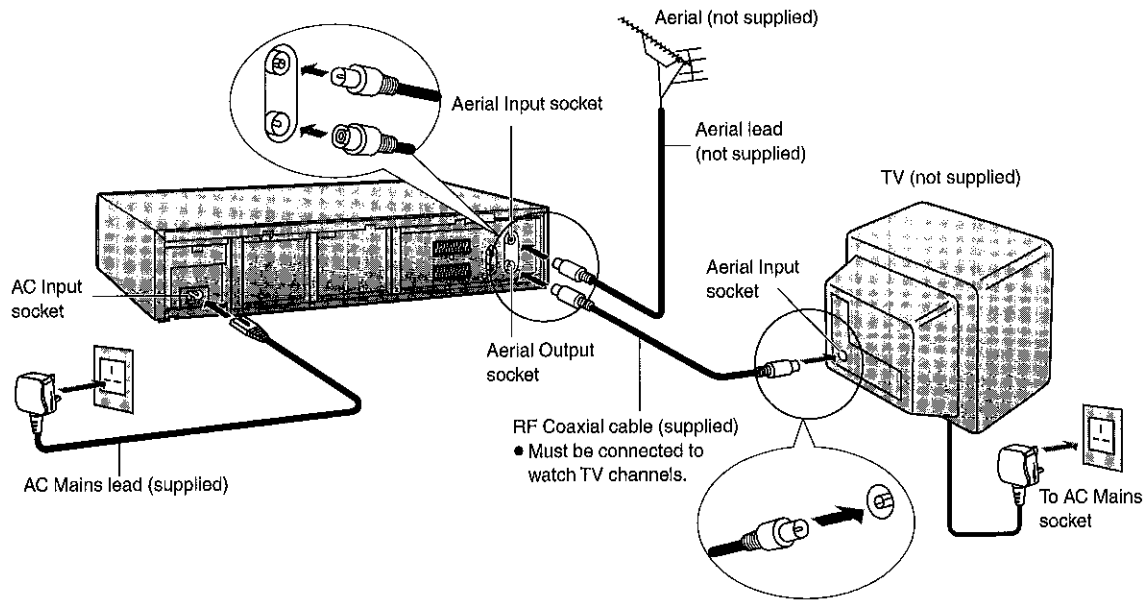
**Notes for Battery Replacement:**

- When the batteries are exhausted, remove them immediately and dispose of them correctly.
- Make sure that the batteries are inserted with the polarity (⊕ and ⊖) correctly aligned.
- Do not mix old batteries with new batteries.
- Do not mix different battery types, i.e. Alkaline and Manganese.
- Do not use rechargeable (Ni-Cd) batteries.
- Do not heat or short-circuit the batteries.
- When you do not use the remote control for a long time, take out the batteries and store them in a cool, dry place.

# Connecting the VCR to a TV

## Method 1.

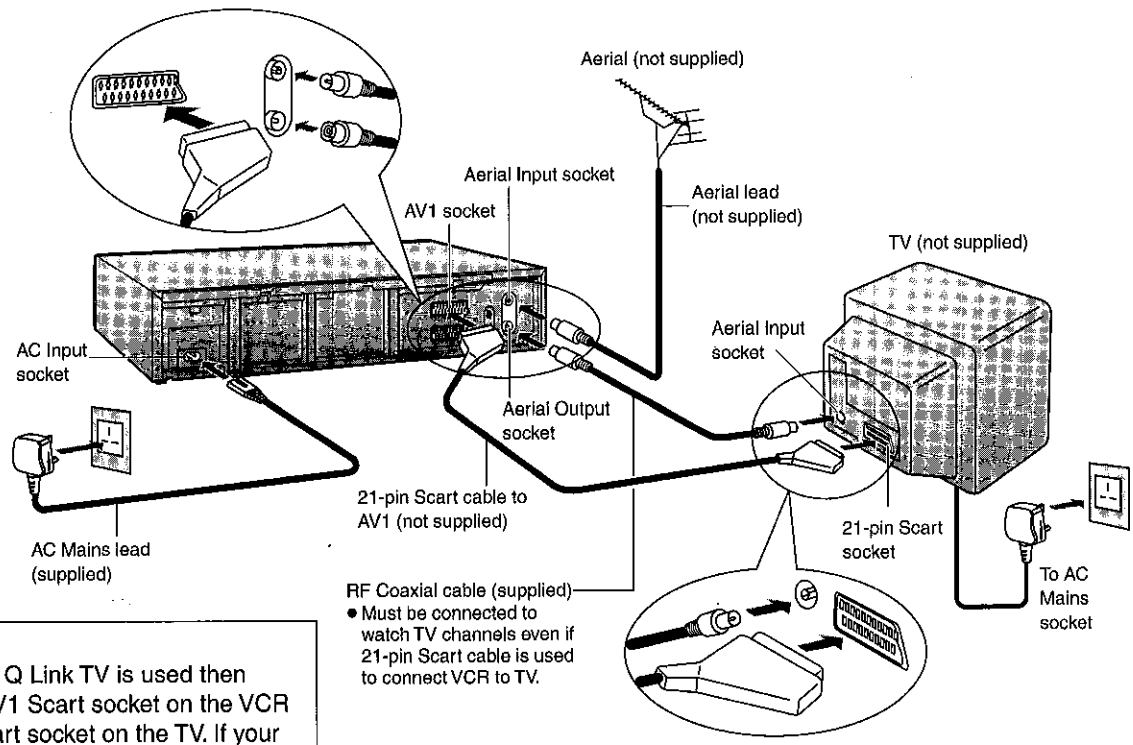
If you are connecting your VCR to a TV using only RF coaxial cable, then follow the steps below.




**After completing the above connections proceed to the Auto Setup page. (Page 7)**

## or Method 2.

If you are connecting your VCR to a TV using RF coaxial cable and 21-pin Scart cable, then follow the steps below.


Aerial (not supplied)
Aerial Input socket
AV1 socket
Aerial lead (not supplied)
TV (not supplied)
AC Input socket
Aerial Input socket
Aerial Output socket
21-pin Scart cable to AV1 (not supplied)
21-pin Scart socket
AC Mains lead (supplied)
RF Coaxial cable (supplied)
• Must be connected to watch TV channels even if 21-pin Scart cable is used to connect VCR to TV.
To AC Mains socket

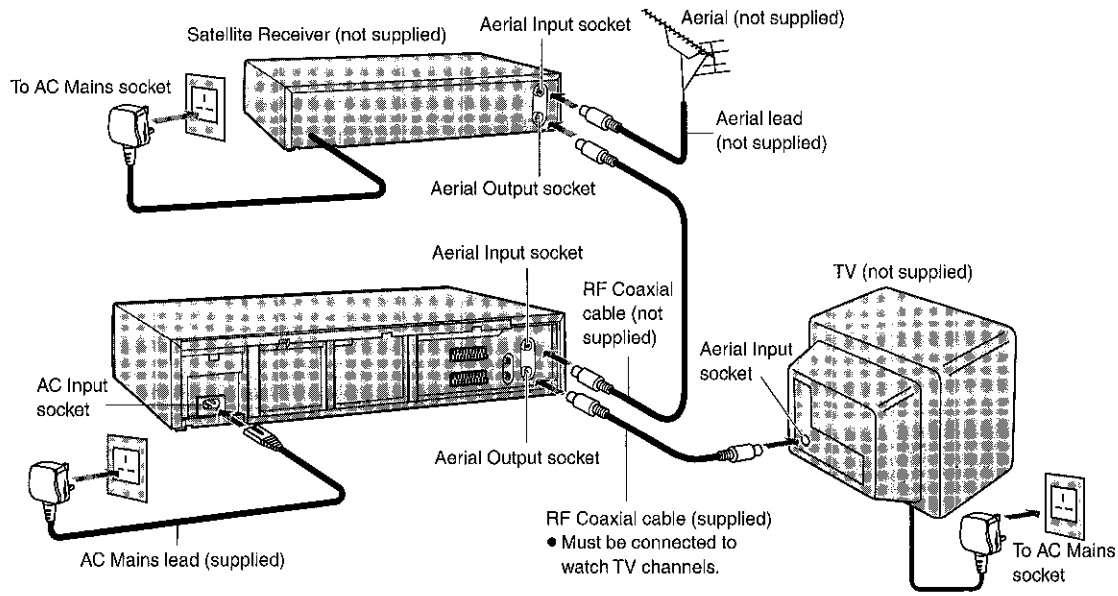
**Note:**
If a Panasonic Q Link TV is used then connect the AV1 Scart socket on the VCR to the AV2 Scart socket on the TV. If your TV is not a Panasonic Q Link TV, please consult your TV's operating instructions

**After completing the above connections, proceed to the Auto Setup page (Page 7) for TV without Q Link, proceed to page 13 for Q Link type TV.**

# Connecting the VCR to a Satellite Receiver and a TV

## Method 1.

If you are connecting your VCR to a Satellite Receiver and a TV using only RF coaxial cables, then follow the steps below.

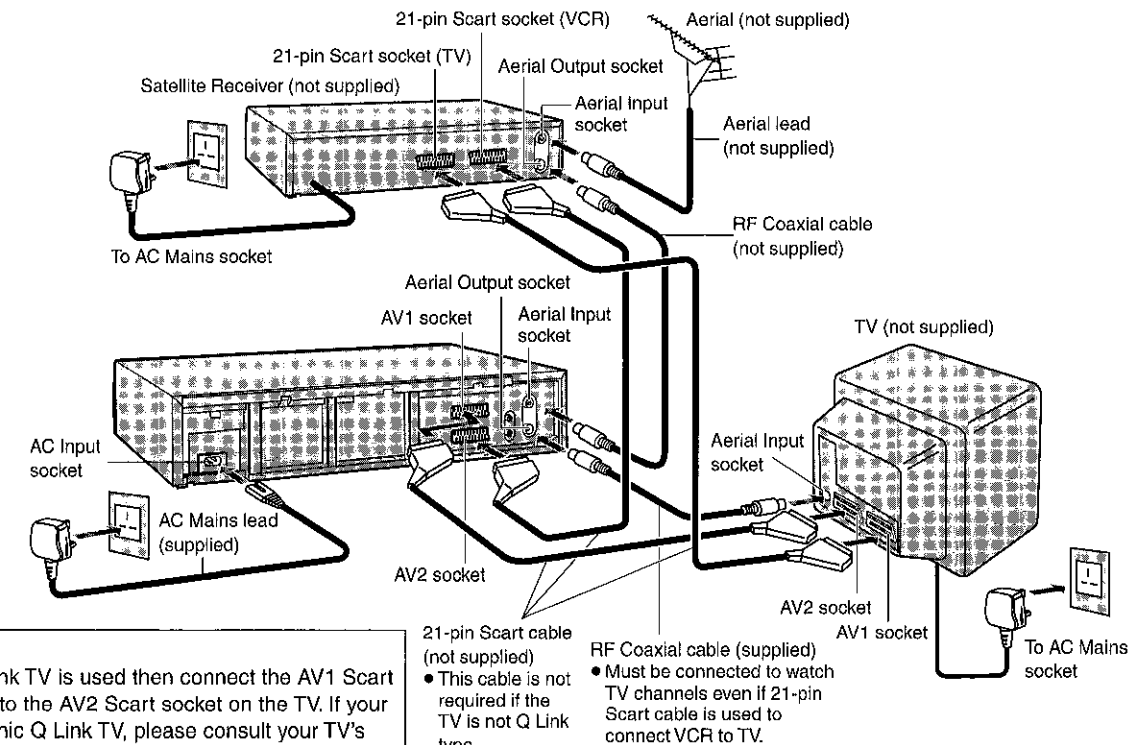



- When connecting with an RF cable, the RF output channel of the receiver should be adjusted away from the RF output channel of the VCR, which may be used by the VCR during Auto Setup, to avoid interference on VCR picture. (Refer to your satellite receiver's instruction book.) Also select "SKY ONE" or "SKY NEWS" on the satellite receiver to ensure reliable tuning before starting the Auto Setup.

**After completing the above connections proceed to the Auto Setup page. (Page 7)**

## or Method 2.

If you are connecting your VCR to a Satellite Receiver and a TV using RF coaxial cables and 21-pin Scart cables, then follow the steps below.


21-pin Scart socket (VCR)
Aerial (not supplied)
21-pin Scart socket (TV)
Aerial Output socket
Satellite Receiver (not supplied)
Aerial Input socket
Aerial lead (not supplied)
RF Coaxial cable (not supplied)
To AC Mains socket
Aerial Output socket
AV1 socket
Aerial Input socket
TV (not supplied)
AC Input socket
Aerial Input socket
AC Mains lead (supplied)
AV2 socket
AV2 socket
AV1 socket
21-pin Scart cable (not supplied)
• This cable is not required if the TV is not Q Link type.
RF Coaxial cable (supplied)
• Must be connected to watch TV channels even if 21-pin Scart cable is used to connect VCR to TV.
To AC Mains socket

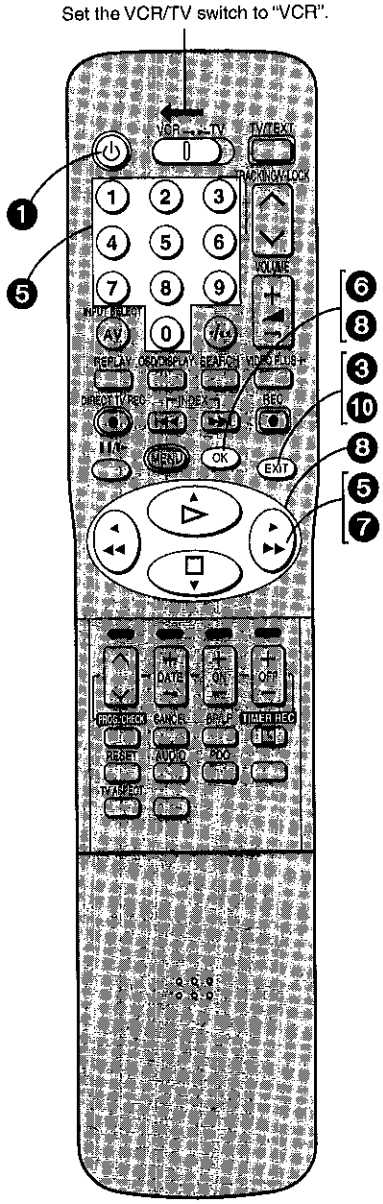
**Note:**
If a Panasonic Q Link TV is used then connect the AV1 Scart socket on the VCR to the AV2 Scart socket on the TV. If your TV is not a Panasonic Q Link TV, please consult your TV's operating instructions

**After completing the above connections, proceed to the Auto Setup page (Page 7) for TV without Q Link, proceed to page 13 for Q Link type TV.**

# Auto Setup (For TV without Q Link Functions)

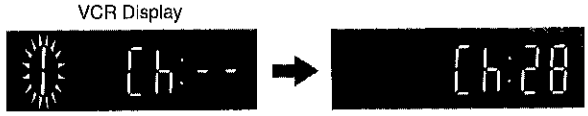
**Ensure that**
- if a satellite receiver is also connect ensure that it is switched ON.
- set the satellite receiver to either "SKY ONE" or "SKY NEWS".

Set the VCR/TV switch to "VCR".



❶ Connect the VCR to an AC mains socket and turn it on.
- The VCR display flashes and after a few minutes, the VCR display stops flashing and displays the RF output channel number.

VCR Display

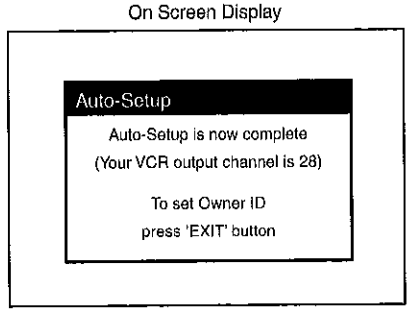


Indication when the VCR is switched on

Indication when the RF output channel is 28 (example)

❷ Select an unoccupied programme position on your TV and tune it to the RF output channel number determined in step ❶ above until the indication shown below is received clearly.
- If interference can be seen on the picture, you may need to change the RF output channel. To do this, follow the instructions on page 9.
- If your VCR is connected to your TV with a Scart cable (Q Link or auto-switching) then this screen will appear automatically and this step is optional.

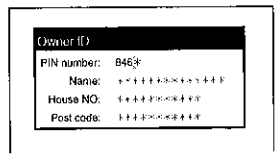
On Screen Display




Indication when Auto Setup is complete

❸ Press the EXIT button on the VCR remote control.

❹ The Owner ID menu appears. (You can enter the identification information now or do it later).




Owner ID indication

❺ Press the Cursor button (▶) and the Numeric buttons to enter a 4-digit PIN number.
- Be sure to remember this number.

❻ Press the OK button twice. The cursor moves to "Name".

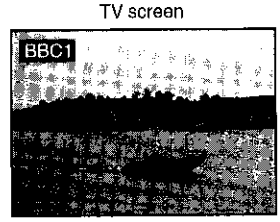
❼ Press the Cursor button (▶).

❽ Press the Cursor buttons (▲▼◀▶) to select a letter and then press the OK button. Repeat this to enter the name.

❾ Enter House No. and Postcode in the same way.

❿ **Press the EXIT button again if you don't want to set the Owner ID at this stage.**
- The picture of BBC 1 will appear. Your VCR is now ready for use.

TV screen




(continued on the next page)

# Auto Setup Continued...

We advise that you check whether the stations have all been found in the correct order. This is important for Video Plus+ to work correctly. To display the list of tuned TV stations, see page 10.

**Positions 5 and 6 may differ from the example shown.**

If Channel 5 is received, it is usually found on programme position 5 and a connected satellite receiver on programme position 6.

If Channel 5 is not received but a satellite receiver is connected, then the satellite receiver is found on programme position 5.

Tuning

| Pos | Name | Ch | Pos | Name | Ch |
|---|---|---|---|---|---|
| 1 | BBC1 | 22 | 11 | ----- | -- |
| 2 | BBC2 | 23 | 12 | ----- | -- |
| 3 | ITV | 24 | 13 | ----- | -- |
| 4 | CH4 | 25 | 14 | ----- | -- |
| 5 | CH5 | 26 | 15 | ----- | -- |
| 6 | SAT | 33 | 16 | ----- | -- |
| 7 | ----- | -- | 17 | ----- | -- |

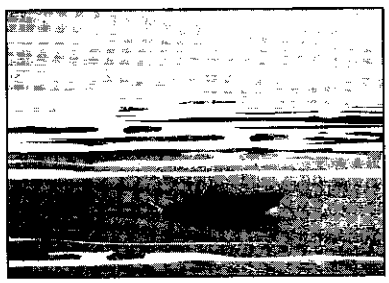
List of tuned TV stations (example)

**Hints:**
If the clock setting menu appears after Auto Setup has finished, this indicates that the VCR was not able to set the clock automatically. Follow the operation guide on the On Screen Display to set the clock manually. (See page 48.)

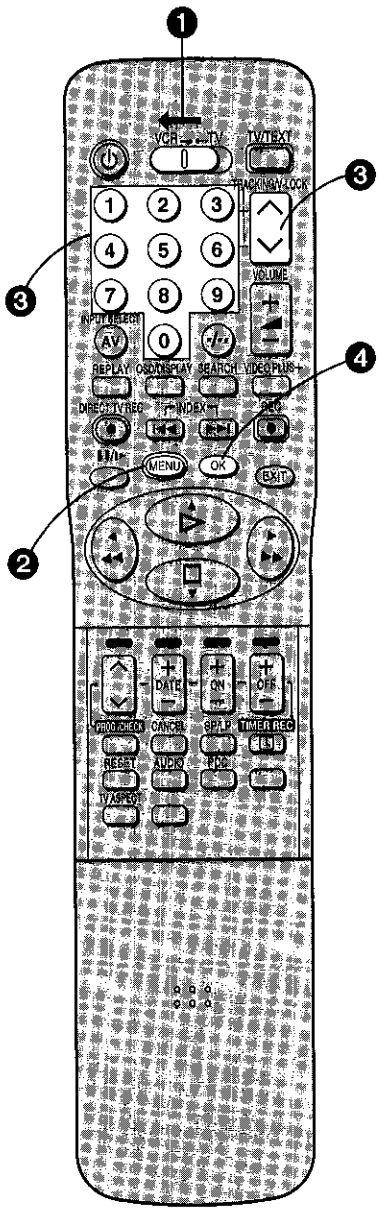
**To Display the Owner ID setting menu**
Keep the EJECT button pressed for more than 5 seconds.
- However, the PIN number is not displayed.
- After 30 seconds, this menu automatically disappears.

# Removing Interference

TV screen



The picture with interference




**In some cases, interference (lines or patterning) may be seen on the TV when playing back a video cassette. If this happens, follow the steps below to change the video playback channel (RF output channel) to remove the interference.**

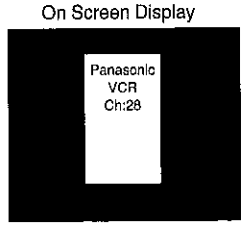
❶ Set the VCR/TV switch to "VCR".

❷ Press the MENU button for more than 5 seconds. The RF output channel number is displayed on the VCR display.

VCR display

Indication when the RF output channel is 28 (example)

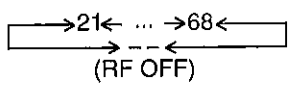
On Screen Display




Test pattern indication

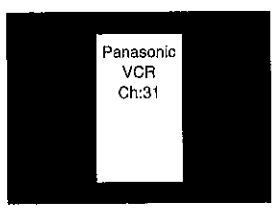
❸ Press the numeric buttons or use the Channel button (∨) or (∧) to select a channel number which differs by 2 or 3 from the automatically set channel number. (For example, if the original channel number was 28, enter 31.)

- Set the RF output channel of the VCR to "– –" (RF OFF) when the VCR is connected to the TV via the 21-pin Scart cable.
  Press the "0" numeric button or Channel button (∨) or (∧) to display "– –".

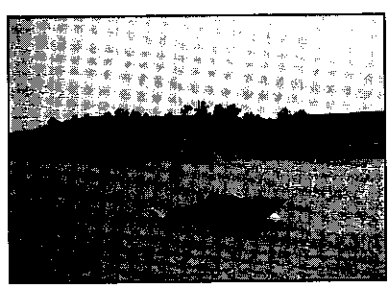


Indication after changing the RF output channel to 31 (example)

❹ Retune your TV until you receive the Test pattern indication. Press the OK button to conclude the setting.

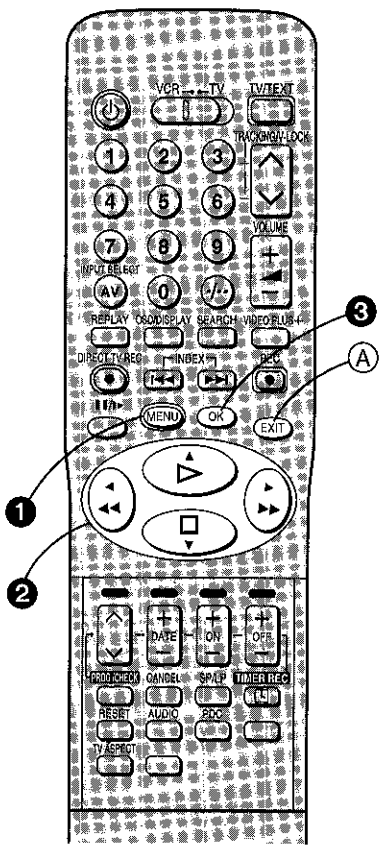



Test pattern indication



The clear picture

# Checking the Settings for Auto Setup



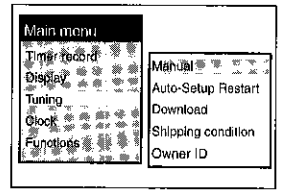

## To Confirm that the TV Stations Have Been Tuned Correctly by the Auto Setup Function

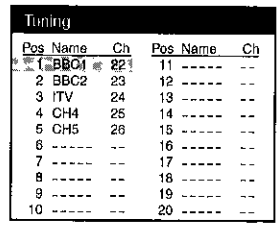
❶ Press the MENU button to display the OSD Main menu on the TV screen.

❷ Press the Cursor buttons (▲▼◄►) to select "Tuning" and then "Manual".

❸ Press the OK button to display the list of tuned TV stations and confirm that all available TV stations have been set correctly.

On Screen Display




List of tuned TV stations (example)

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

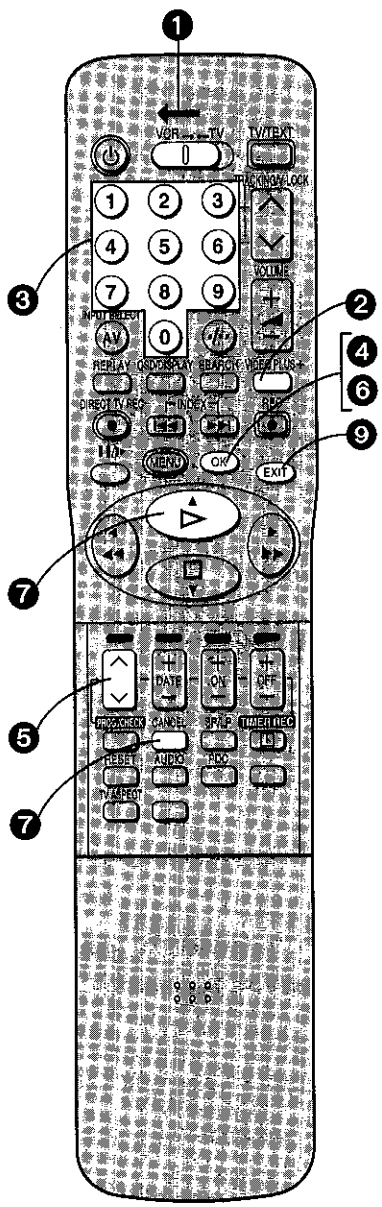
**Hint:**
**When the station names and/or channel numbers have not been set correctly:**

① Press the MENU button to display the OSD Main menu.
② Press the Cursor buttons (▲▼◄►) to select "Tuning", and then "Manual".
③ Press the OK button to display the list of tuned TV stations.
④ Press the Cursor buttons (▲▼◄►) to select the programme position whose station name and/or channel number you want to change.
⑤ Press the OK button to display the Manual Tuning menu.
⑥ Press the Cursor buttons (▲▼◄►) to enter the correct station name and channel number.
⑦ Press the OK button to conclude the setting.
⑧ Press the MENU button.
⑨ Press the EXIT button to exit the On Screen Display.

See page 41.

# Video Plus+ PlusCodes for a Satellite Receiver (If Connected)

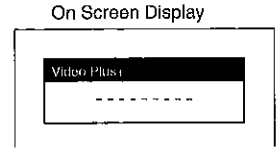
To enable your VCR to recognize Video Plus+ PlusCodes for each satellite station, you need to follow the instructions below. It is important that you do this before trying to make a timer recording using Video Plus+ PlusCode for any satellite programme. This involves setting some dummy timer recordings from Video Plus+ PlusCodes then deleting them afterwards.




❶ Set the VCR/TV switch to "VCR".

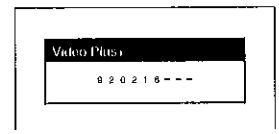
❷ Press the VIDEO PLUS+ button.

On Screen Display



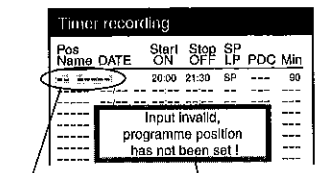

Menu for entering the PlusCode

❸ Enter a PlusCode from a Satellite Programme Guide for a station, e.g. Sky 1 using the numeric buttons.



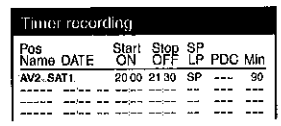

Indication when the PlusCode is entered

❹ Press the OK button.
You will see the warning message on the screen for the first few seconds telling you that the position number has not been set.
• "– –" appears for the programme position




"– –" indication  Warning message

❺ Press the Channel button (∨) or (∧) until the SAT name appears in the name column on the screen. You can select the AV position if you have connected your satellite receiver to your VCR with a scart cable.

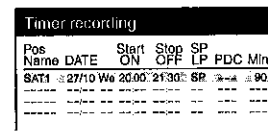



Indication when SAT name is selected

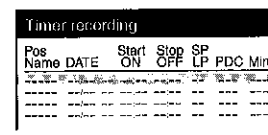
❻ Press the OK button again to conclude the setting.

Indication when the settings are concluded

❼ Press the Cursor buttons (▲) and then the CANCEL button to delete the programming.




Menu when the programme to cancel is selected




Menu after the programming has been cancelled

❽ Repeat steps ❷ to ❼ above for another satellite station. Continue with this until you have set and deleted a dummy timer recording for each satellite station that you will make Video Plus+ recording from.

❾ Press the EXIT button to exit the On Screen Display.

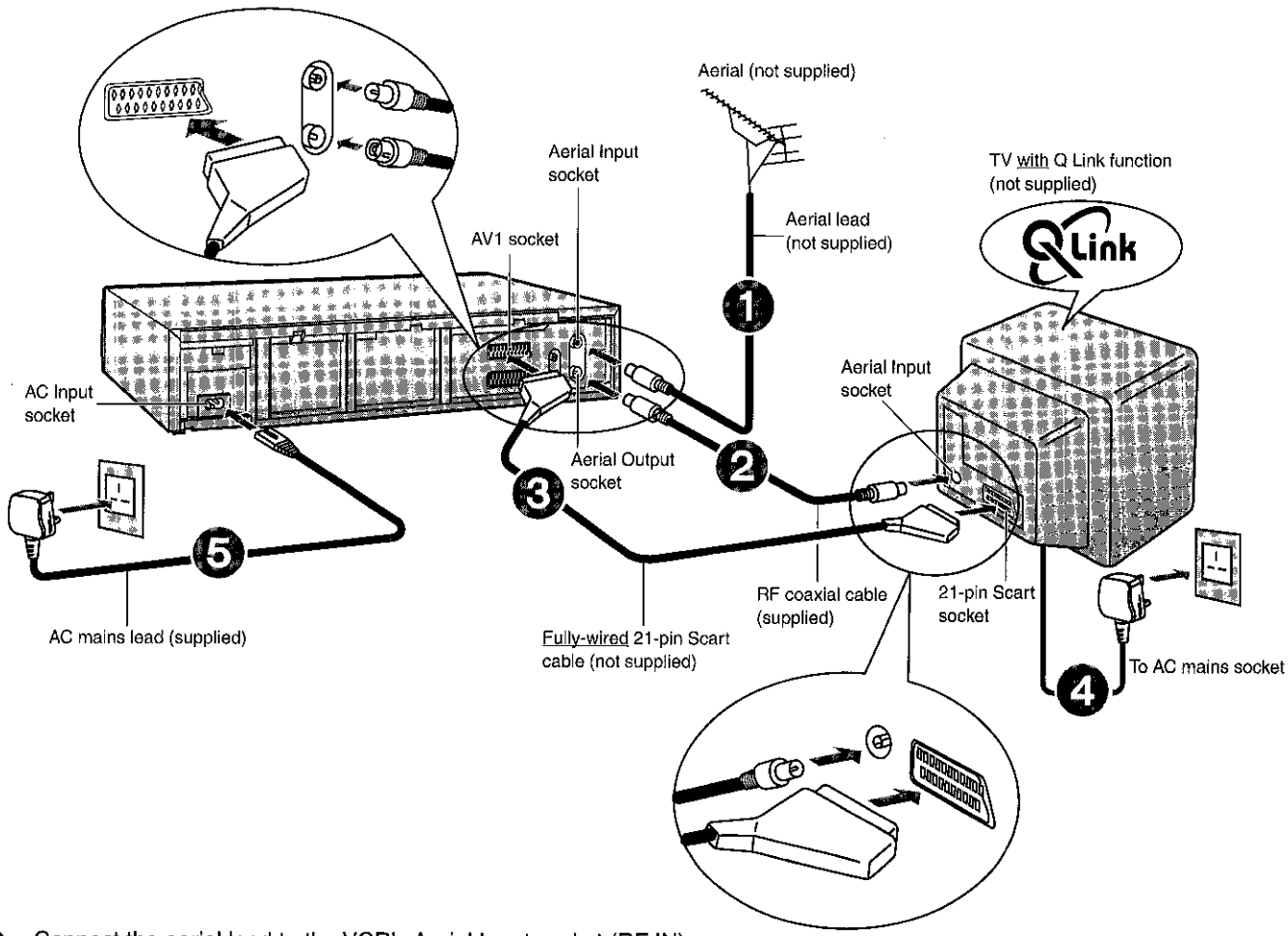
**Your VCR is now able to recognize Video Plus+ PlusCodes for the satellite stations, ready for when you come to use them.**

# Connections and Preparations for a TV Equipped with the Q Link Function

Connections and preparations for a TV equipped with the Q Link*1 function and equipped with a 21-pin Scart socket.
For the connections and preparations for a TV equipped with the "DATA LOGIC*2", "Easy Link*3", "Megalogic*4" or "SMARTLINK*5" function and with a 21-pin Scart socket, also read from this page.

For details about the connections, also read TV's operating instructions.

Be sure to keep both the TV and VCR switched off until all connections have been made.
For your safety, be sure not to connect or handle the equipment with wet hands.




❶ Connect the aerial lead to the VCR's Aerial Input socket (RF IN).

❷ Connect the supplied RF coaxial cable to the VCR's Aerial Output socket (RF OUT) and to the TV's Aerial Input socket.

❸ Connect a fully-wired 21-pin Scart cable (not supplied) to the VCR's AV1 socket and to the TV's 21-pin Scart socket.

❹ Connect the TV to an AC mains socket.

❺ Connect the VCR to an AC mains socket.

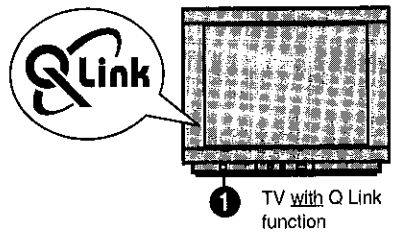
The basic connections are now complete. Proceed to the next page.

**Hints:**

- Q Link is an advanced system that offers a range of convenient functions such as automatic copying of the tuning position of all available TV stations (in the same order as they are programmed on the TV) into your VCR's memory (this is called Download) if you connect the VCR to your TV with a fully-wired 21-pin Scart cable (not supplied). Depending on the manufacturer, the equivalent of the Q Link function has a different name and may not work exactly the same.
  *1"Q Link" is a registered trademark of Panasonic.
  *2"DATA LOGIC" is a registered trademark of Metz.
  *3"Easy Link" is a registered trademark of Philips.
  *4"Megalogic" is a registered trademark of Grundig.
  *5"SMARTLINK" is a registered trademark of Sony.
  For details, refer to your TV's operating instructions or consult your dealer.

- Unlike in most commercially sold 21-pin Scart cables, in fully-wired 21-pin Scart cables all 21 pins of one plug are connected to the matching pin of the plug on the other end of the cable. This type of cable is necessary for the Preset Download function to work.

# Connections and Preparations for a TV Equipped with the Q Link Function Continued...



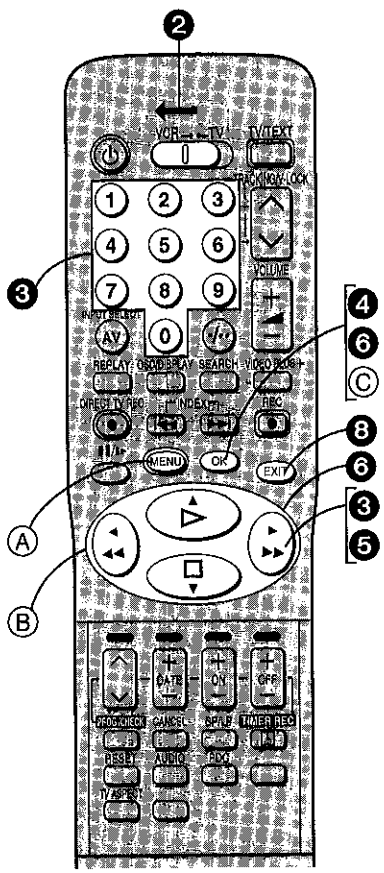



## Automatically Copying the Tuning Position of All Available TV Stations in the Same Order from the TV on to the VCR

### (Preset Download Function)

The Preset Download function automatically copies the tuning position of all available TV stations into the VCR's memory when you connect the VCR using a fully-wired 21-pin Scart cable to a TV equipped with the Q Link function.

A-1 To simultaneously set up this VCR with a new TV, follow the operation steps explained below.
A-2 To set up this VCR with a TV already in use, follow the operation steps explained on the next page.




### A-1 To Simultaneously Set Up this VCR with a New TV

If you have purchased the VCR and the TV at the same time, perform the following operations:
Perform the following operation steps exactly as described to ensure that the Preset Download function works correctly.

◆ First of all, make sure that the VCR is switched off.

❶ Switch the TV on.
The TV starts to tune all available TV stations and to adjust the clock.
(This is called Auto Setup function.)

◆ When the TV has finished its own auto setup, the VCR is automatically switched on, and the downloading of the setup data from the TV to the VCR starts.

❷ Set the VCR/TV switch to "VCR".

❸ When Download has finished, the screen for the Owner ID setting menu appears. Press the Cursor button (▶) and the Numeric buttons to enter a 4-digit PIN number.
• Be sure to remember this number.

❹ Press the OK button twice. The cursor moves to "Name".

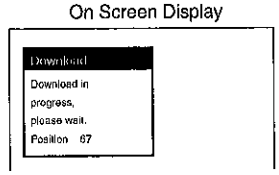
❺ Press the Cursor button (▶).

❻ Press the Cursor buttons (▲▼◀▶) to select a letter and then press the OK button. Repeat this to enter the name.

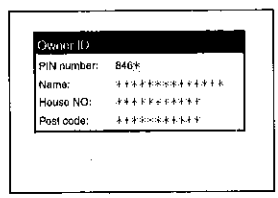
❼ Enter House No. and Postcode in the same way.

❽ Press the EXIT button to make the On Screen Display disappear.

On Screen Display




Indication during downloading




Menu for Owner ID setting

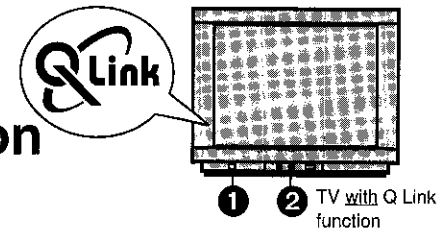
**To Display the Owner ID setting menu**
Keep the EJECT button pressed for more than 5 seconds.
• However, the PIN number is not displayed.
• After 30 seconds, this menu automatically disappears.

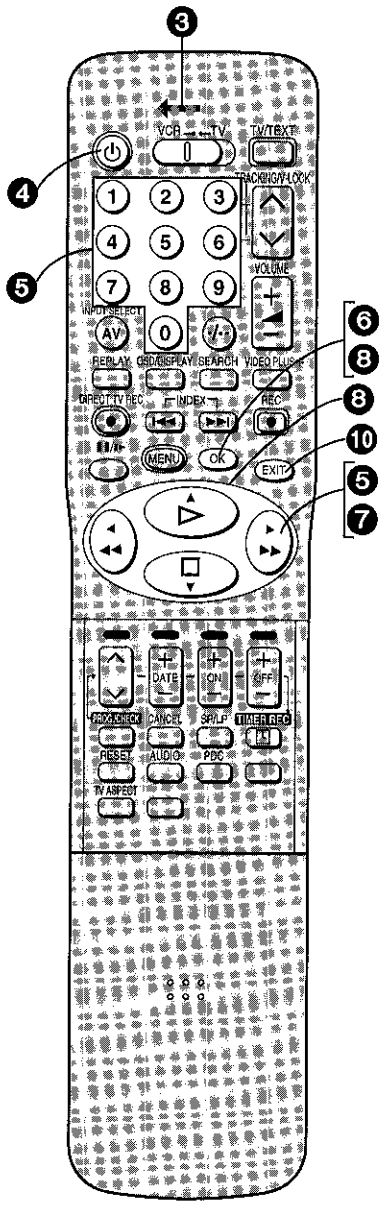
**Note:**
In the operation A-1, if you accidentally switch on the VCR before the TV, downloading of the setup data from the TV may not be performed correctly. In this case, follow the operation steps below.

① Wait until the Auto Setup is complete on both the TV and the VCR.
② Press the MENU button Ⓐ to display the OSD Main menu on the TV screen.
③ Press the Cursor buttons (▲▼◀▶) Ⓑ to select "Tuning" and then "Download".
④ Press the OK button Ⓒ twice. Downloading of the setup data from the TV to the VCR starts.
⑤ When the programme position "1" and the current time appear in the VCR display, downloading is complete.

**Hint:**
If you use a Panasonic TV and perform the operation step ❶ above, starting the downloading of the setup data will automatically display the Download indication. However, in case of a TV of another make, the Download indication may not appear. In this case, select the AV input on your TV if you want to see the Download indication.

# Connections and Preparations for a TV Equipped with the Q Link Function Continued...

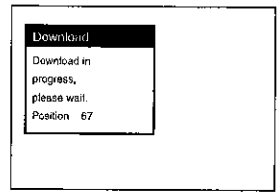


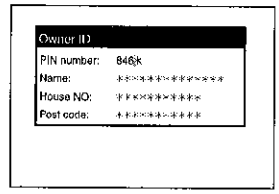

## A-2 To Set Up this VCR with a TV Already in Use

1. Switch the TV on.
2. Select the AV input on your TV.
3. Set the VCR/TV switch to "VCR".
4. Press the Power button (⏻) to switch the VCR on. Downloading of the setup data starts automatically.
5. When Download has finished, the Owner ID setting menu appears. Press the Cursor button (▶) and the Numeric buttons to enter a 4-digit PIN number.
   - Be sure to remember this number.
6. Press the OK button twice. The cursor moves to "Name".
7. Press the Cursor button (▶).
8. Press the Cursor buttons (▲▼◀▶) to select a letter and then press the OK button. Repeat this to enter the name.
9. Enter House No. and Postcode in the same way.
10. Press the EXIT button to make the On Screen Display disappear.

On Screen Display




Indication during downloading




Menu for Owner ID setting

**To Display the Owner ID setting menu**

Keep the EJECT button pressed for more than 5 seconds.
- However, the PIN number is not displayed.
- After 30 seconds, this menu automatically disappears.

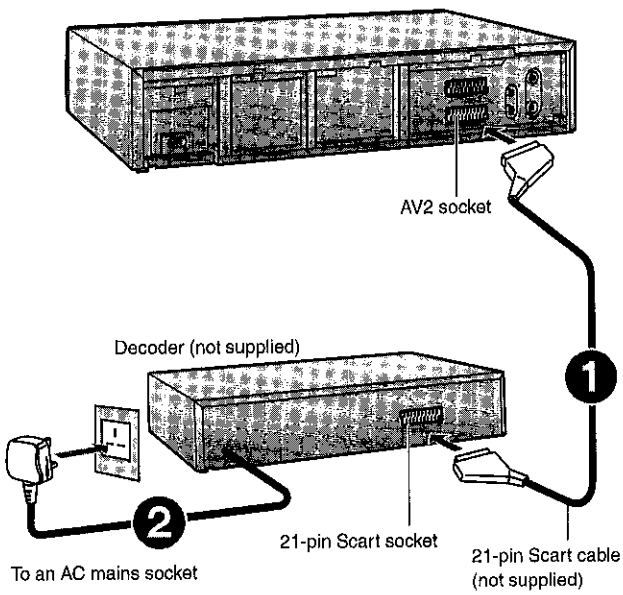
# Connecting the VCR to a Decoder/ Connecting the VCR to a Stereo Amplifier

To connect this VCR to a decoder or a stereo amplifier, make the connections shown in the illustration below.
For the connection to the TV, see page 5 or 12.

For details about the connection, also read the operating instructions of the decoder or stereo amplifier.

Be sure to keep the VCR, TV and decoder or stereo amplifier switched off until you have finished all connections.
For your safety, do not connect or handle the equipment with wet hands.

## To Connect the VCR to a Decoder

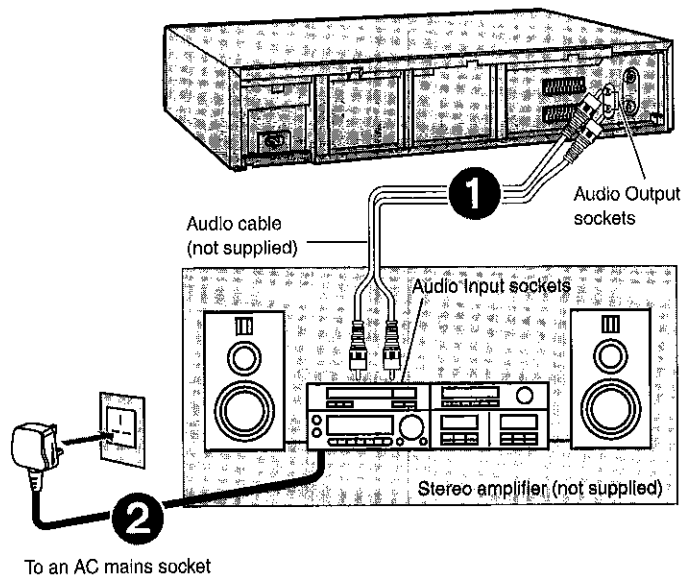



❶ Connect a 21-pin Scart cable (not supplied) to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)] on the VCR and to the 21-pin Scart socket on the decoder.

❷ Connect the decoder's mains lead to an AC mains socket.

❸ Set "AV2" to "DECODER".
For details, see below.

## To Connect the VCR to a Stereo Amplifier




❶ Connect an Audio cable (not supplied) to the Audio Output sockets (AUDIO OUT) on the VCR and to Audio Input sockets on the stereo amplifier.

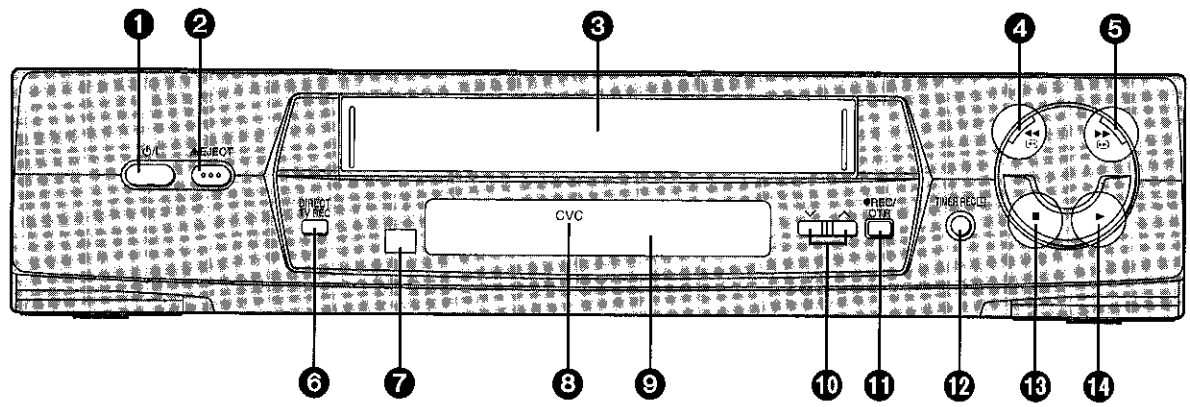
❷ Connect the stereo amplifier's mains lead to an AC mains socket.

**Note:**
After connecting the decoder to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)] on this VCR, you need to change the setting for "AV2" to "DECODER". Follow the operations below:

❶ Press the MENU button to display the Main menu on the TV screen.
❷ Press the Cursor buttons (▲▼◄►) to select "Functions", "AV2", and "VCR/SAT" in this order.
❸ Press the Cursor buttons (▲▼) to set to "DECODER".
❹ Press the OK button to conclude the setting.
❺ Press the EXIT button to make the On Screen Display disappear.

**Hint:**
"RGB" means separate Red/Green/Blue colour signals. If you connect a TV equipped with RGB input capability to the AV1 socket on this VCR, and a decoder equipped with RGB output capability to the AV2 socket, the TV can receive RGB signal input from the decoder via the VCR.

# Controls and Layout of the VCR




❶ Power button (⏻/I)

❷ Cassette Eject button (EJECT)

❸ Cassette compartment

❹ Rewind/Review button (◀◀)

❺ Fast Forward/Cue button (▶▶)

❻ Direct TV Recording button (DIRECT TV REC)

❼ Infra-red Remote Control Receiver window

❽ Crystal View Control Indicator (CVC)

❾ VCR display

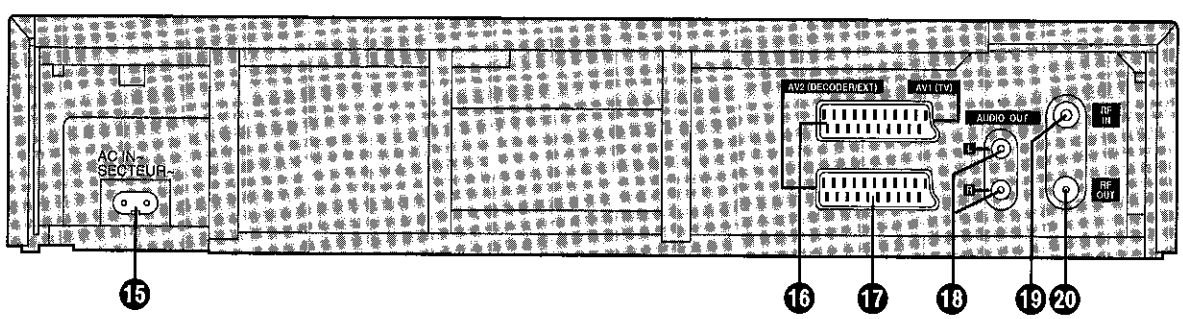
❿ Channel buttons (∨∧)

⓫ Recording/One-Touch Recording button (REC/OTR)

⓬ Timer Recording button (TIMER REC)

⓭ Stop button (■)

⓮ Play button (▶)




⓯ AC Input socket (AC IN ~)

⓰ AV1 21-pin Scart socket [AV1 (TV)]

⓱ AV2 21-pin Scart socket [AV2 (DECODER/EXT)]

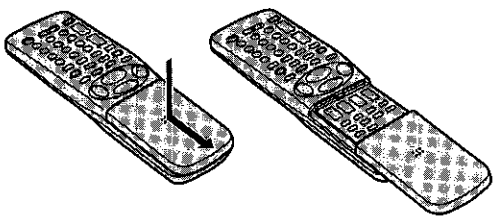
⓲ Audio Output sockets (AUDIO OUT)

⓳ Aerial Input socket (RF IN)

⓴ Aerial Output socket (RF OUT)

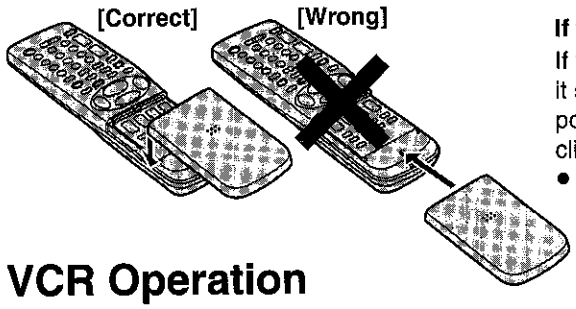
# Controls and Layout of the Remote Control





## To Open the Sliding Cover of the Remote Control:

Slide the cover downward while pressing down on the protruding parts.



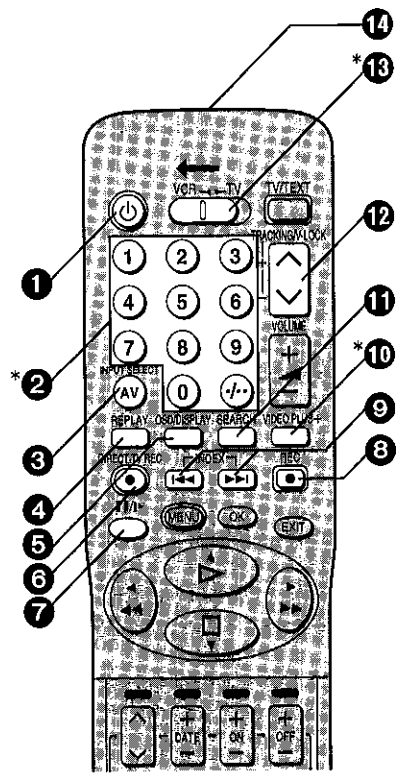

**If the Sliding Cover of the Remote Control Becomes Detached**

If the sliding cover of the remote control becomes detached accidentally, fit it securely in place by placing it on the top of the remote control at the position shown in the illustration on the left, and pushing it down until it clicks into position.

- It is not possible to fit the sliding cover in place by pushing or sliding it on from the bottom end of the remote control.

## VCR Operation

When you want to operate the VCR, set the VCR/TV switch to "VCR".
Controls marked with an asterisk (*) are further explained at the bottom of the page.



❶ **Power button (⏻)**

*❷ **Numeric buttons**

❸ **Input Select button (INPUT SELECT)**

❹ **Replay button (REPLAY)**

❺ **On Screen Display/Display button (OSD/DISPLAY)**

❻ **Direct TV Recording button (DIRECT TV REC)**

❼ **Pause/Slow button (❚❚/❚▶)**

❽ **Recording button (REC)**

❾ **Index buttons (INDEX)**

*❿ **Video Plus+ Programming button (VIDEO PLUS+)**

⓫ **Search button (SEARCH)**

⓬ **Channel button (∨∧)**
**Tracking/Vertical-Lock button (TRACKING/V-LOCK)**

*⓭ **VCR/TV switch**

⓮ **Infra-red transmitter**

**Hints:**

***❷Numeric buttons**

To select the programme positions (1-99) of the VCR.

Example:

9: (9)

19: (-/--) → (1) → (9)

To enter a Video Plus+ PlusCode.

To enter numbers for various settings.

***❿Video Plus+ Programming button (VIDEO PLUS+)**

Use this button when you want to programme timer recordings using the Video Plus+ PlusCodes. For this convenient programming method, you use the individual numbers which are assigned to each TV programme and listed in newspapers and magazines.

***⓭VCR/TV switch**

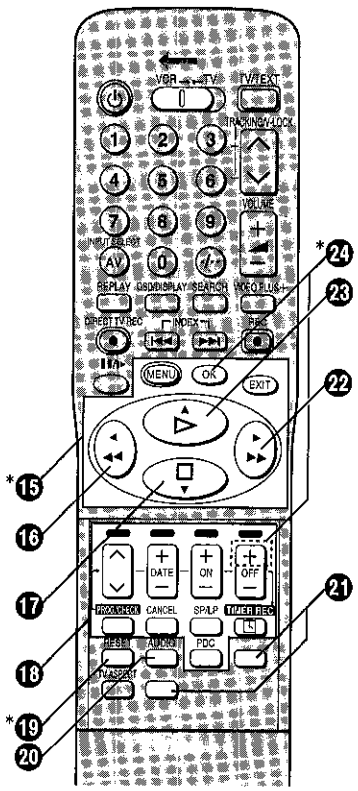
If you set this switch to TV, you can use this remote control to turn your TV on or off, select TV/AV Input, and operate other TV functions. (See page 19.)

When you want to operate the VCR, set this switch to "VCR".

The initial setting is "VCR".

# Controls and Layout of the Remote Control Continued...

Controls marked with an asterisk (*) are further explained at the bottom of the page.




*⑮ **On Screen Display Menu Operation buttons**
- **Menu button (MENU)**
- **OK button (OK)**
- **Exit button (EXIT)**
- **Cursor buttons (▲▼◀▶)**

⑯ **Rewind button (◀◀)**

⑰ **Stop button (□)**

⑱ **Timer Recording Operation buttons**
- **Channel button (∨∧)**
- **Date button (DATE)**
- **Starting Time button (ON)**
- **Ending Time button (OFF)**
- **Programme/Check button (PROG./CHECK)**
- **Cancel button (CANCEL)**
- **Standard Play/Long Play button (SP/LP)**
- **Timer Recording button (TIMER REC)**
- **Programme Delivery Control button (PDC)**

*⑲ **Tape Counter Reset button (RESET)**

⑳ **Audio button (AUDIO)**

㉑ These buttons do not operate any function on this VCR.

㉒ **Fast Forward button (▶▶)**

㉓ **Play button (▷)**

*㉔ **Child Lock Function buttons**

**Hints:**

***⑮On Screen Display Menu Operation buttons**

You can display menus with the timer programmings and operations for timer recording as well as other settings on the TV screen and operate them on the TV screen using the following buttons:

**Menu button (MENU):** To display the OSD Main menu on the TV screen.
To return to the previous menu.

**OK button (OK):** To confirm and accept the settings.

**Exit button (EXIT):** To exit the OSD.

**Cursor buttons (▲▼◀▶):** To select an item.
These buttons also function for playback, stop, rewinding and fast-forwarding.

***⑲Tape Counter Reset button (RESET)**

To reset the tape counter (elapsed time) to "0:00.00".

- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

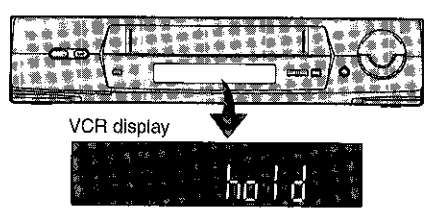
***㉔Child Lock Function buttons**
**(Convenient function to prevent unauthorized use)**

This function deactivates all buttons on the VCR and the remote control. Use this function, when you do not want other people to operate the VCR.

**To Activate the Child Lock Function:**

① Set the VCR/TV switch to "VCR".

② Hold down the OK and the OFF (+) buttons simultaneously until the "hold" indication appears in the VCR display.
- If you press a button while the Child Lock function is on, the "hold" indication appears in the VCR display to inform you that no operation is possible.




Indication when the Child Lock function is activated

**To Cancel the Child Lock Function:**

① Hold down the OK and the OFF (+) buttons simultaneously until the "hold" indication disappears.
- If you disconnect the power cable, the Child Lock function is automatically cancelled after the power backup time of approximately 60 minutes has elapsed.

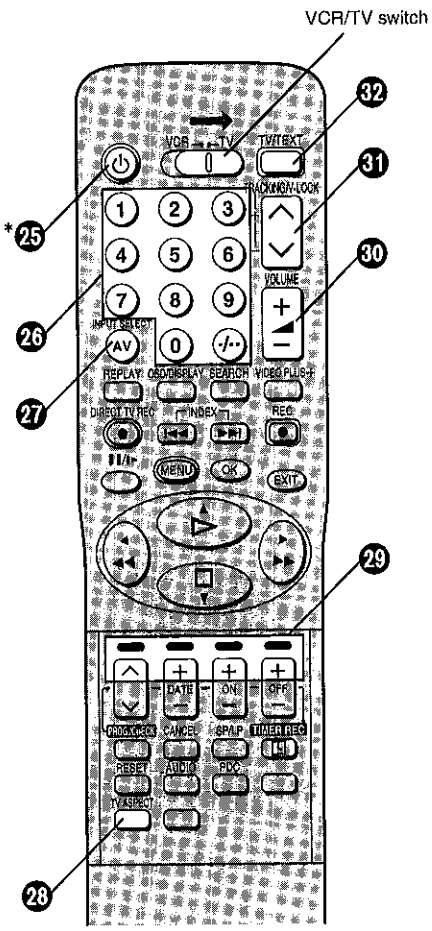
# Controls and Layout of the Remote Control Continued...



## TV Operation

This remote control can also be used to operate a Panasonic TV.
The explanations below show you what functions individual buttons have when the VCR/TV switch is set to "TV".

The control marked with an asterisk (*) is further explained at the bottom of the page.




***㉕Power button (⏻)**
To switch the TV on from standby mode (OFF) or vice versa.

**㉖ Numeric buttons**
To select the programme positions (1-99) on the TV.

**㉗ AV button (AV)**
To select the desired AV input on the TV.

**㉘ TV Screen Format button (TV ASPECT)**
To switch the screen format between the wide-screen and other formats.

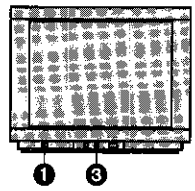
**㉙ Teletext buttons**
If your TV is equipped for Teletext reception, you can use these buttons to change the teletext information displayed on the screen and select desired information. For details, refer to your TV's operating instructions.

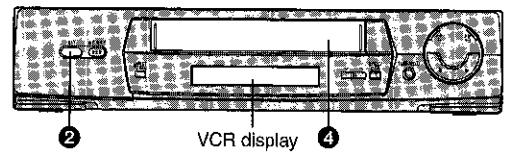
**㉚ Volume button (◢)**
To adjust the volume of the TV.

**㉛ Channel button (∨∧)**
To select the desired programme position (TV station) on the TV.

**㉜ TV/Text button (TV/TEXT)**
To switch between normal TV mode and teletext mode.

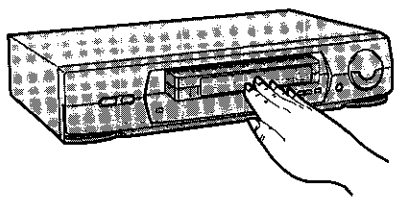
**Hint:**
***㉕Power button (⏻)**
On some TVs it is only possible to switch the TV to standby mode (OFF) with this button, but not on. In this case, try to turn the TV on with one of the following buttons:
**Numeric buttons**
**AV button (AV)**
**Channel button (∨∧)**



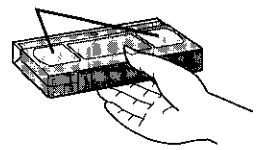




# Playback

## Inserting and Ejecting a Cassette

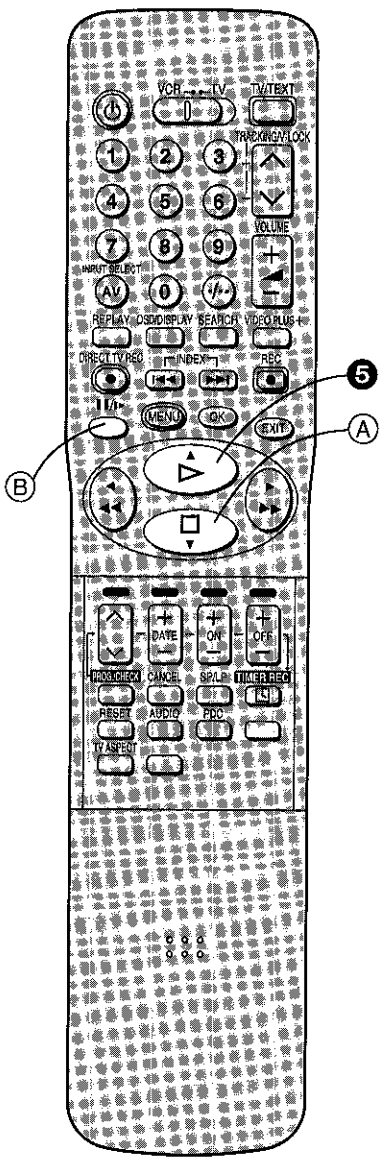


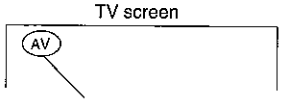
Cassette windows



Insert the cassette with the window side facing upward.

To eject a cassette press the Eject button on the VCR or hold down the Stop button (□) Ⓐ for more than 5 seconds.




| Operation Steps | Confirmation of Operation |
|---|---|
| ❶ **Switch the TV on.** | |
| ❷ **Press the Power button (⏻/I) to switch the VCR on.** | |
| ❸ **Select AV input on your TV.**<br>• If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV. | TV screen<br>  <br><br>This indication may be different on your TV. |
| ❹ **Insert the recorded video cassette.** | VCR display<br> <br><br>Indication when the video cassette is inserted |
| ❺ **Press the Play button (▷).**<br>• Playback starts. | <br>Indication displayed during playback |

## ◆ To Stop Playback

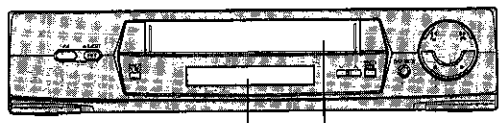
Press the Stop button (□).

## ◆ To Pause Playback Briefly (Still Playback)

Press the Pause/Slow button (❚❚/I►) Ⓑ briefly.

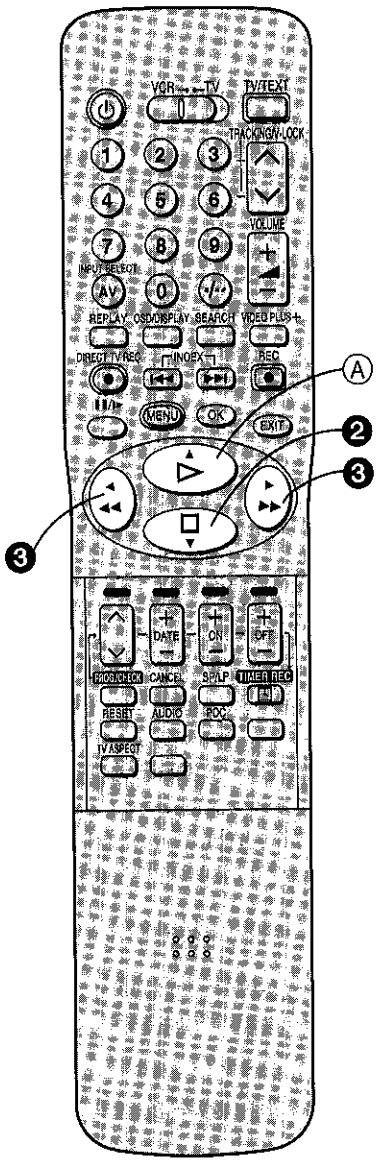
• If you leave the VCR in the still playback mode for more than 5 minutes, the VCR cancels this mode automatically to protect the tape and video heads, and it switches over to the stop mode.

Indication during still playback




# Other Playback and Convenient Functions

Described on this page are the operations for fast-forwarding and rewinding the tape. However, depending on whether the tape is stopped or is being played back, pressing the Fast Forward button (▶▶) or the Rewind button (◀◀) will activate a different function.
In addition, the activated function also differs depending on how long you press the button. Operate these buttons according to the intended function.




| Operation Steps | Confirmation of Operation |
|---|---|
| **Fast-forwarding or Rewinding the Tape**<br>❶ **Insert a video cassette.**<br>❷ **Press the Stop button (□) to put the VCR in the stop mode. This prevents automatic playback start.**<br>❸ **To fast-forward the tape:**<br>**Press the Fast Forward button (▶▶).**<br>❸ **To rewind the tape:**<br>**Press the Rewind button (◀◀ ).**<br>◆ To stop fast-forwarding or rewinding, press the Stop button (□).<br>◆ To briefly view the picture during fast-forwarding or rewinding, press and hold down the corresponding button. | VCR display<br> <br>Indication when the tape is stopped<br> <br>Indication during fast-forwarding or cue playback<br> <br>Indication during rewinding or review playback |
| **Fast-forwarding or Rewinding the Tape while Viewing the Playback Picture**<br>**For Cue Playback:**<br>During playback, press the Fast Forward button (▶▶) briefly.<br>**For Review Playback:**<br>During playback, press the Rewind button (◀◀ ) briefly.<br>◆ To resume normal playback, press the Play button (▷) Ⓐ.<br>◆ If you press and hold down the Fast Forward button (▶▶) or the Rewind button (◀◀ ), cue or review playback continues for as long as you keep the button pressed. | |

Playback

**Notes for special playback functions (except normal playback):**

- During playback function other than normal playback, horizontal noise bars may appear in the picture, the colour of the picture may unstable, or the picture may be otherwise distorted.
  When you play back a tape recorded in the LP (Long Play) mode, the picture may be in black and white. However, these are not malfunctions.
- If cue or review playback continues for more than 10 minutes, the VCR automatically switches over to the normal playback mode to protect the tape and video heads.

# Other Playback and Convenient Functions Continued...

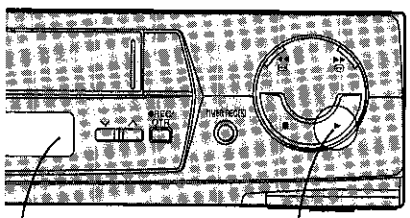
## ◆ To Perform Slow Playback

Press and hold down the Pause/Slow button (❚❚/I►) Ⓐ for more than 2 seconds during playback.

- If the slow playback mode continues for more than 10 minutes, the VCR cancels this mode automatically to protect the tape and video heads, and it switches over to the stop mode.

Indication during slow playback

## ◆ To Stop Playback Automatically (Playback Off Timer Function)




If you set the playback duration, the playback will stop automatically.
After the set playback time has elapsed, the VCR automatically stops playback and switches off.

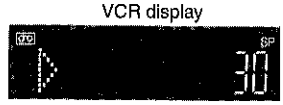
**To Activate the Playback Off Timer Function:**

During normal playback, press the Play button (►) Ⓑ on the VCR for more than 2 seconds to put the VCR in the Playback Off Timer mode. (The indication shown below appears on the VCR display.)
After that, press the Play button (►) on the VCR repeatedly until the desired playback duration is displayed on the VCR display.

- At each press of this button, the indication changes as follows:

Counter display (normal playback mode) → 30 (min.) → 60 (min.) → 120 (min.) → 180 (min.) → 240 (min.) → Counter display (normal playback mode)

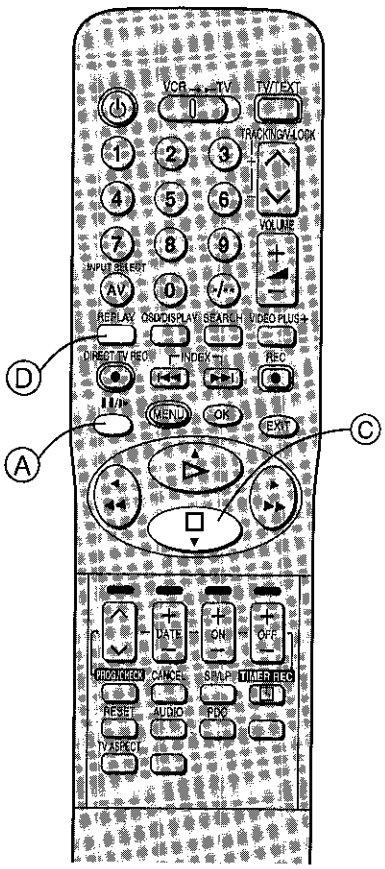
VCR display



Indication when the VCR is in the Playback Off Timer mode (a playback duration of 30 minutes is selected)

**To Stop Midway:**

Press the Stop button (□) Ⓒ.




## ◆ To Rewind the Tape a Little to View the Same Scene Again (Replay Function)

If you want to view the same scene again, for example because you could not catch clearly what a person said, simply press the REPLAY button Ⓓ, to rewind the tape a little from its present position and play it back again.
The direction in which the tape is rewound depends on what playback mode the VCR is in when you press the REPLAY button.

- If you press the REPLAY button when the VCR is in the stop, rewind, fast-forward, slow playback, or standby (Off) mode, the Replay function does not work.

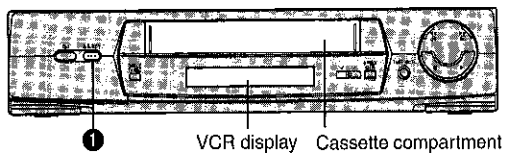
**During Normal Playback, Cue Playback and Still Playback:**

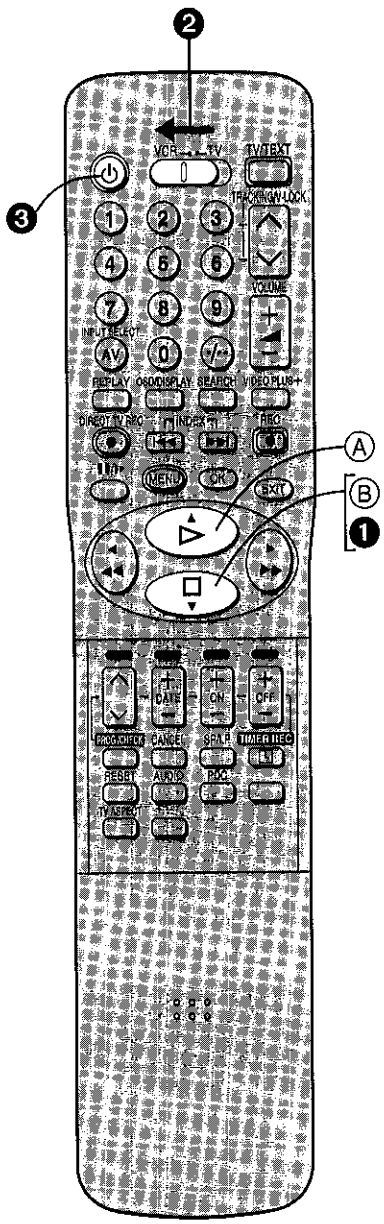
When you press the REPLAY button, the VCR switches over to the review playback mode for a few seconds and then resumes normal playback.

**During Review Playback:**

When you press the REPLAY button, the VCR briefly switches over to cue playback and then plays back at normal speed in forward direction from the point where the REPLAY button was pressed.

# Other Playback and Convenient Functions Continued...

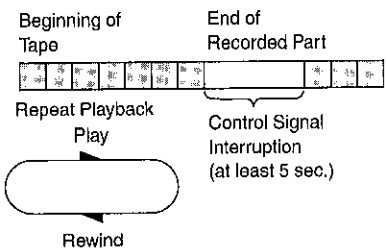


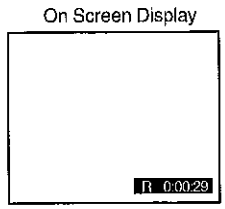




## ◆To Play Back a Recorded Part Repeatedly

Press the Play button (▷) Ⓐ on the remote control for more than 5 seconds.
The "R" indication appears on the On Screen Display.

- If "OSD" on the "Display" screen is set to OFF (See page 50), the "R" indication does not appear.




**To Cancel the Repeat Playback Mode:**
Press the Stop button (□) Ⓑ.

## ◆To Play Back NTSC Video Cassettes on Your PAL TV (Quasi-NTSC Playback Function)

This VCR allows playback of NTSC recorded tapes on a normal PAL TV.

On some TVs, however, the playback picture may roll up or down.

- If your TV has a V-HOLD control or equivalent adjustment function, use it to try to stop the picture movement. The height of the picture may not fill the complete screen.

## ◆Convenient Automatic Functions

This VCR features the following convenient functions:

- **VCR Auto Power On**
  When you insert a video cassette, the VCR switches on automatically.
- **Auto Playback Start**
  When you insert a video cassette with a broken erasure prevention tab, playback start automatically without having to press the Play button (▷).
- **Auto Rewind (this function does not work during timer recording and OTR)**
  When the tape reaches the end, the VCR automatically rewinds it to the beginning.

## ◆After Use

❶ Press the EJECT button on the VCR and take out the cassette.

❶ Or, press and hold the Stop button (□) on the remote control for more than 3 seconds and then take out the ejected cassette.

❷ Set the VCR/TV switch to "VCR".

❸ Press the Power button (⏻) to switch the VCR off.

- Ejecting the video cassette is also possible when the VCR is off. It will switch on, eject the cassette and then switch off again.

VCR display

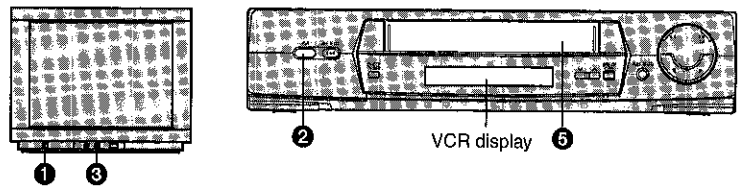
Indication when a video cassette is inserted

Cassette indication disappears.

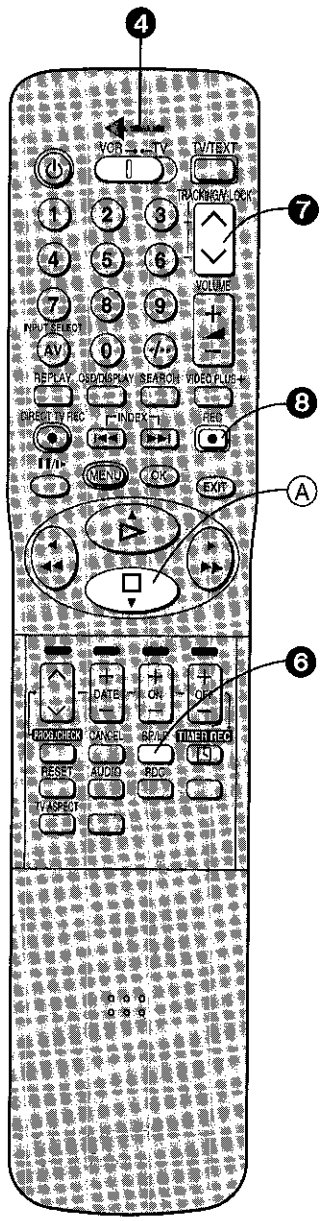
**Hint:**

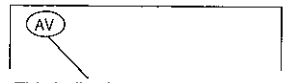
- There are three major TV broadcast systems in the world. Their use depends on the country and continent, and these systems are not compatible with each other.

Major Broadcast Systems:
PAL: UK, Germany and most West-European countries, Australia, New Zealand, South Africa, China, etc.
NTSC: USA, Canada, Japan, etc.
SECAM: France, Middle-Eastern countries, etc.




# Recording




| Operation Steps | Confirmation of Operation |
|---|---|
| ❶ **Switch the TV on.** | |
| ❷ **Press the Power button (⏻/I) to switch the VCR on.** | |
| ❸ **Select the AV input on your TV.**<br>• If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV. | TV screen<br>  <br><br>This indication may be different on your TV. |
| ❹ **Set the VCR/TV switch to "VCR".** | |
| ❺ **Insert a video cassette with intact erasure prevention tab. (See page 26.)** | VCR display<br> <br>Indication when the video cassette is inserted |
| ❻ **Press the SP/LP button to set the desired tape speed.**<br>• SP provides standard recording time and optimum picture quality.<br>LP provides doubled recording time with slightly reduced picture quality. | <br>Indication when SP is selected |
| ❼ **Press the Channel button (∨) or (∧) to select the programme position of the TV programme that you want to record.** | <br>Indication of the selected programme position |
| ❽ **Press the REC button.**<br>• Recording starts. | <br>Indication during recording |

## ◆To Stop Recording

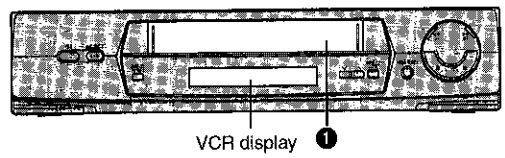
Press the Stop button (□) Ⓐ.

**Hint:**

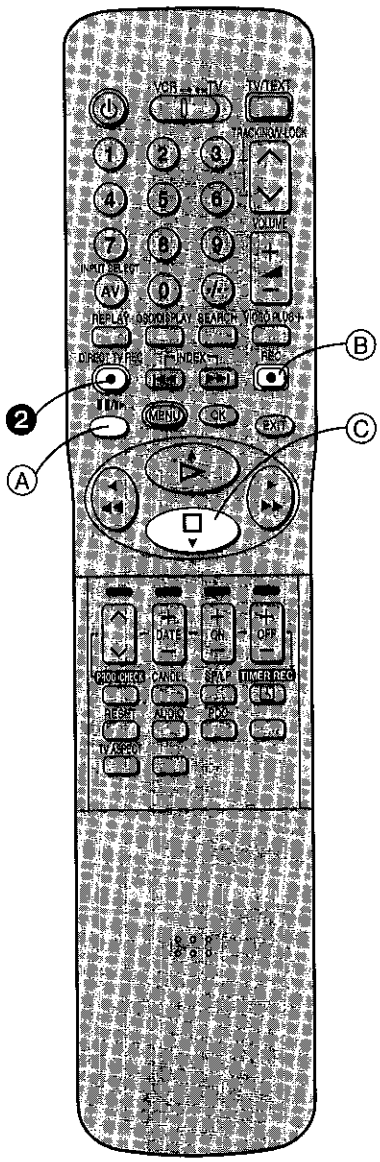
- We do not recommend the use of tapes longer than E240 type as the tape can be too thin.

**Note about the Tape Speed (SP/LP):**

The initial setting is "SP".
SP stands for Standard Play.
LP stands for Long Play.




# Recording Continued...




## ◆ To Pause Recording

Press the Pause/Slow button (❚❚/▸) Ⓐ.
To resume recording, press the Pause/Slow button (❚❚/▸) again.

- If you leave the VCR in the pause mode for more than 5 minutes, the VCR cancels this mode automatically, and it switches over to the stop mode.

VCR display

Indication during recording pause

## ◆ To View One TV Programme while Recording Another TV Programme

After pressing the REC button Ⓑ to start recording, select on your TV the programme position of the TV programme that you want to view.

## ◆ To Immediately Record the Same TV Programme That You Are Viewing on the TV (Direct TV Recording)

This function allows you to immediately start recording the same programme that you are viewing on the TV.
The programme position selected on the VCR automatically changes to that of the TV programme that you are viewing on the TV. At the end of the TV programme, the recording stops and, the VCR automatically switches back to the previously selected programme position.

Conditions for correct functioning of the Direct TV Recording function:

- Your TV must be equipped with the "Q Link" function.
- The VCR must be connected to the TV via a fully-wired 21-pin Scart cable.

**To Perform Direct TV Recording:**

❶ Insert a video cassette with an intact erasure prevention tab.

❷ Press the DIRECT TV REC button.
- Recording of the TV programme that you are viewing on the TV starts.

Indication during recording

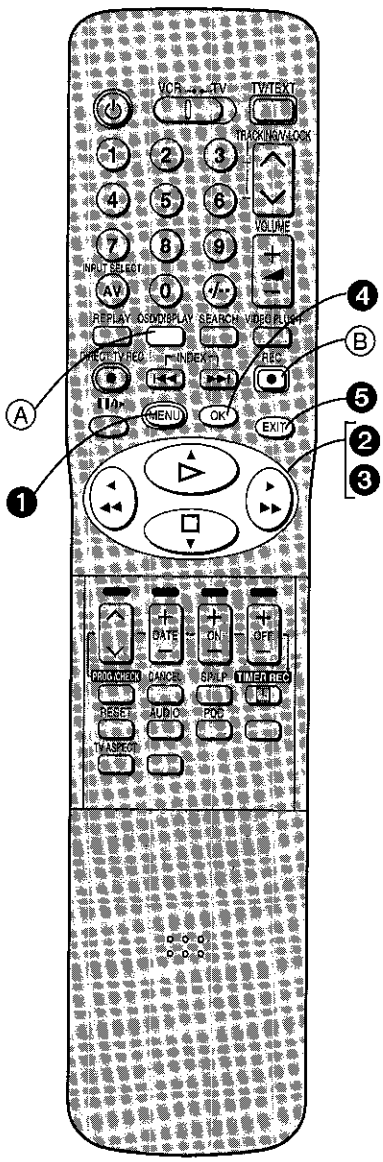
**To Stop Recording Midway:**
Press the Stop button (□) Ⓒ.

Recording

**Hint:**

- In some cases, it may not be possible to change the programme position on the TV during Direct TV Recording.

# Recording Continued...




## ◆ To Confirm the Approximate Remaining Tape Time

The remaining tape time can be displayed on the On Screen display and in the VCR display.
Condition for correct display of the remaining tape time:
- The tape length of the tape being used must be set correctly.

(For example, select the tape length "◀E-180" for a 180-minute cassette.)

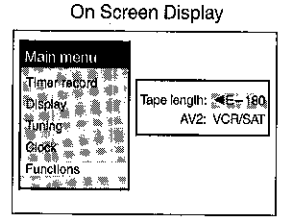
**To Set the Tape Length:**

❶ Press the MENU button to make the Main menu appear on the TV screen.

❷ Use the Cursor buttons (▲▼◀▶) to select "Functions", "Tape length", and "◀E-180" in this order.

❸ Press the Cursor buttons (▲▼) to select the tape length of the video cassette you are using.
◀E-180: For E30, -60, -90, -120 and -180 tapes
E-195: For E195 tape
E-240: For E240 tape
E-260▶: For E260 and -300 tapes

On Screen Display



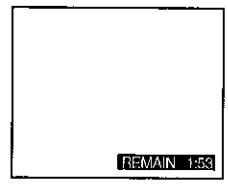

Menu for setting the Tape Length setting

❹ Press the OK button to conclude the setting.

❺ Press the EXIT button to exit the menu.

**To Display the Remaining Tape Time:**
Press the OSD/DISPLAY button Ⓐ until the remaining tape time is displayed on the On Screen Display.
Pressing the OSD/DISPLAY button once makes the On Screen Display appear; after that, pressing it repeatedly changes the indication in the following order:

→Clock→Counter→
Remaining Tape Time←

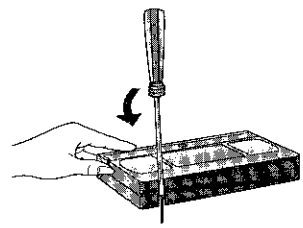



Indication of the remaining tape time

- For certain cassettes, the remaining tape time may not be displayed correctly.
- If "OSD" on the "Display" screen is set to OFF (See page 50), the indication of the remaining tape time does not appear on the On Screen display.

## ◆ To Prevent Accidental Erasure of Recorded Contents

When you record again onto a previously recorded video cassette, the previous recording is automatically erased and replaced with the new recording. Therefore, to prevent accidental
erasure of the recorded contents, break out the erasure prevention tab after recording.

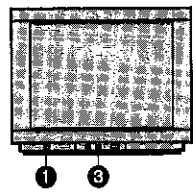


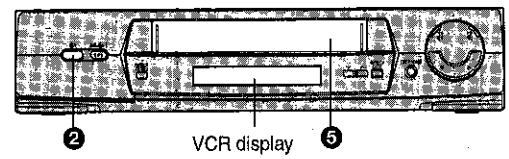
Erasure prevention tab

Use a screwdriver or similar tool to break out the tab.

**To Record Again onto the Video Cassette with a Broken Out Erasure Prevention Tab:**
If you insert a video cassette with a broken out erasure prevention tab and press the REC button Ⓑ, the "⊙⊙" indication flashes on the VCR display to indicate that recording is not possible.
In this case, cover the tab hole with two layers of adhesive tape. The adhesive tape substitutes for the prevention erasure tab and makes it possible to record again on this cassette.

Adhesive tape

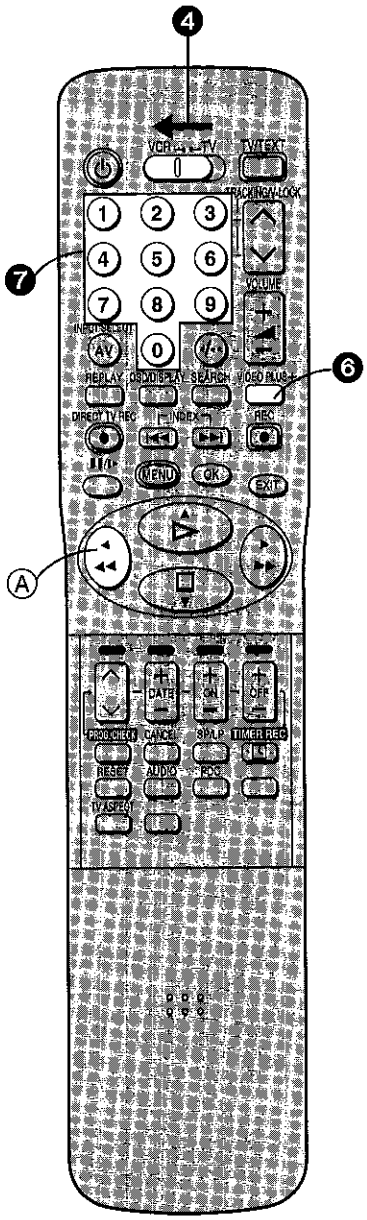



# Timer Recording

This function lets you programme the VCR for unattended automatic recording of desired TV programmes when you are not at home or sleeping.
You can programme timer recordings in two different ways:
(1) By entering the Video Plus+ PlusCode published alongside the TV programme listings in newspapers and magazines (explained below) or ;
(2) By entering the necessary information with the remote control while viewing the On Screen Display (OSD) on the TV screen (see page 30).

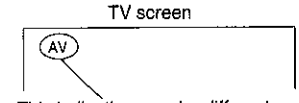
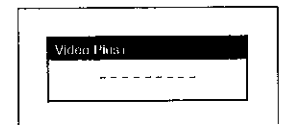
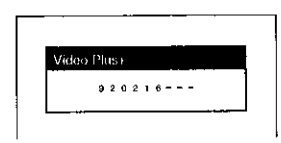
This VCR lets you programme up to 8 TV programmes (including weekly and daily programmes) for unattended recording up to one month in advance.




## (1) Programming with the Video Plus+ Function

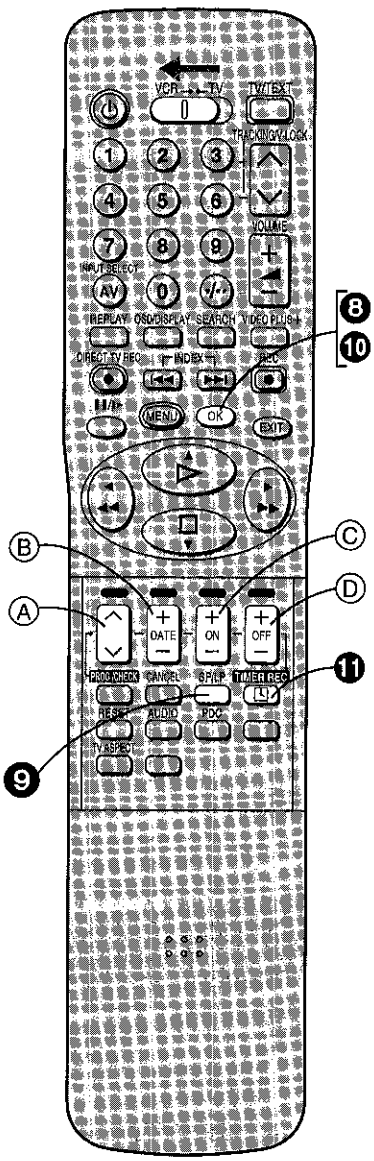
The Video Plus+ PlusCodes (numbers) assigned to each TV programme and published alongside the TV programme listings in newspapers and magazines make it extremely easy to set the VCR for timer recording.
The duration of a timer recording programmed with Video Plus+ PlusCode may be slightly longer than the actual duration of the TV programme.

**Example:**
Programming a timer recording of a TV programme with the Video Plus+ PlusCode 920126

| Operation Steps | Confirmation of Operation |
|---|---|
| ❶ **Switch the TV on.** | |
| ❷ **Press the Power button (⏻/I) to switch the VCR on.** | |
| ❸ **Select the AV input on your TV.**<br>• If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV. | TV screen<br>  <br><br>This indication may be different on your TV. |
| ❹ **Set the VCR/TV switch to "VCR".** | |
| ❺ **Insert a video cassette with an intact erasure prevention tab. (See page 26.)** | VCR display<br> <br>Indication when the video cassette is inserted |
| ❻ **Press the VIDEO PLUS+ button to display the menu for entering the PlusCode on the TV.** | On Screen Display<br>  <br><br>Menu for entering the PlusCode |
| ❼ **Press the Numeric buttons to enter the PlusCode.**<br>• If you have entered a wrong digit, press the Cursor button (◀) Ⓐ and then enter the correct digit. |  <br><br>Indication when the PlusCode is entered |

(continued on the next page)

# Timer Recording Continued...




| Operation Steps | Confirmation of Operation |
|---|---|
| ❽ **Press the OK button to display the programmed content.** | |
| ❾ **Press the SP/LP button to set the desired tape speed.**<br>• SP provides standard recording time and optimum picture quality.<br>LP provides doubled recording time with slightly reduced picture quality.<br>Regarding the "A" indication, refer to page 33. | On Screen Display<br>Timer recording<br>Pos Name DATE Start ON Stop OFF SP LP PDC Min<br>BBC2 27/10 We 20:00 21:30 SP OFF 90<br>Indication when SP is set |
| ❿ **Press the OK button again to conclude the setting.**<br>• To programme additional timer recordings, repeat operation steps ❻-❿. | Timer recording<br>Pos Name DATE Start ON Stop OFF SP LP PDC Min<br>BBC2 27/10 We 20:00 21:30 SP OFF 90<br>Indication when the settings are concluded |
| ⓫ **Press the TIMER REC button to switch the VCR over to the timer recording standby mode.**<br>• At the programmed date and time, the recording will start automatically. | VCR display<br>21:00<br>Indication of the timer recording standby mode |

## ◆ If the Programming Contents Are Not Entered Correctly When Programming with the Video Plus+ Function, or When You Want to Change the Programmed Contents

In some cases, the programming contents may not be entered correctly when programming a timer recording with the Video Plus+ function. In such a case, correct the wrong or missing information in the following way:

**To Correct:**

After displaying the programmed contents in operation step ❾, perform the follwing steps:

To change the programme position:
Use the Channel button (∨∧) Ⓐ.

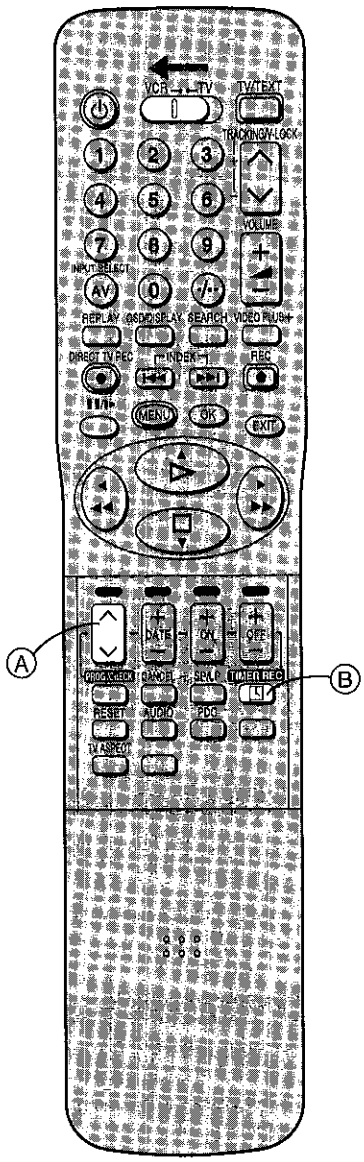
To change the date of timer recording:
Use the DATE button Ⓑ.

To change the recording starting time:
Use the ON button Ⓒ.

To change the recording ending time:
Use the OFF button Ⓓ.

**Note:**
When programming for the satellite channel (SAT), set the required satellite channel manually on your satellite receiver.

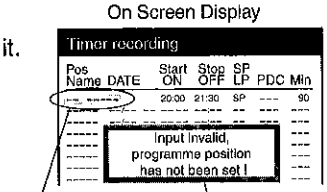
# Timer Recording Continued...




## ◆ If "––" Appears under "Pos/Name" after Entering a Video Plus+ PlusCode (Number)

Pos/Name stands for Programme Position/TV Station Name.
Normally, the name of the TV station or the number of the programme position is displayed under "Pos/Name".
However, if the TV station information was not automatically set during Preset Download or Auto Setup due to adverse reception conditions or a satellite channel is used for the first time,
the "––" indication appears instead.
In such a case, follow the operation steps below to correct it.

On Screen Display




Press the Channel button (∨) or (∧) Ⓐ repeatedly to select the programme position on which the TV programme to be recorded will be broadcast.

After you have entered the information of a TV station, it remains stored in the VCR's memory, and you do not need to enter it again in the future.

## ◆ To Suspend the Timer Recording Standby Mode

When you want to use the VCR for playback, normal recording or some other operation before the programmed timer recording will be performed, you can temporarily suspend the timer recording standby mode by pressing the TIMER REC button Ⓑ so that the "⏲" indication on the VCR display disappears.

However, after you have finished using the VCR, be sure to reactivate the timer recording standby mode by pressing the TIMER REC button again, otherwise the programmed timer recording will not be performed.

VCR display

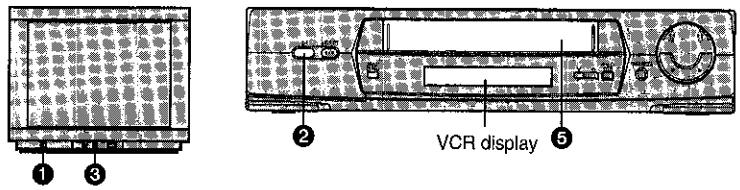
The indication of the timer recording standby mode disappears

Timer Recording

**Hints:**

- After programming a timer recording, confirm that the "⏲" indication is displayed in the VCR display. If the "⏲" indication is flashing, check the timer programming contents and programme it again correctly.
- About 10 minutes before the programmes starting time, if the VCR has not been put in timer recording standby mode, the "⏲" indication flashes on the VCR display. In this case, press the TIMER REC button to put the VCR in the timer recording standby mode.

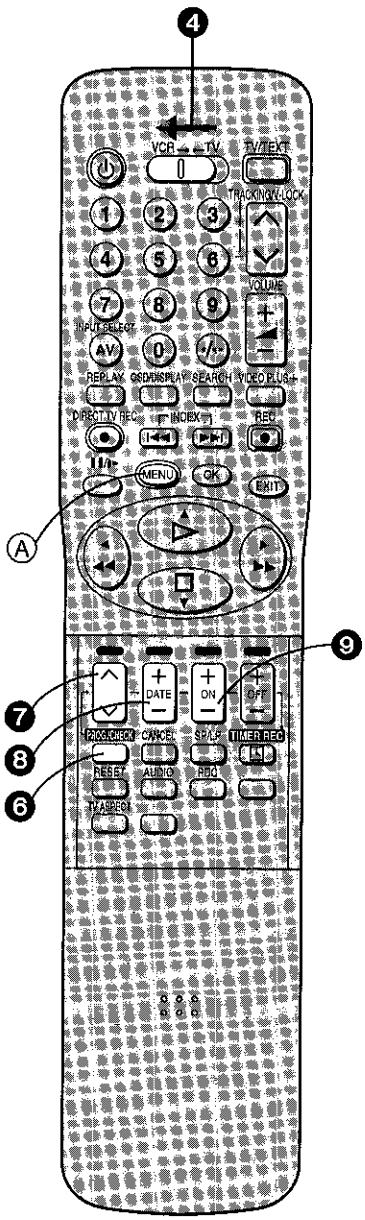
# Timer Recording Continued...

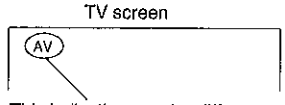
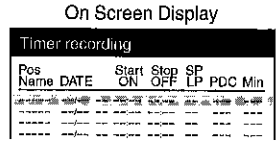
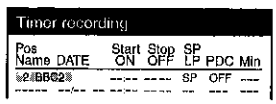
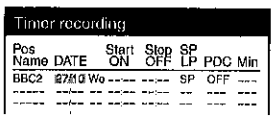
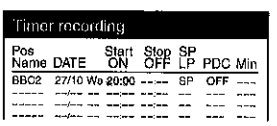



## (2) Programming with the On Screen Display

This method offers easy step-by-step programming with the remote control while you view the prompts on the TV screen.

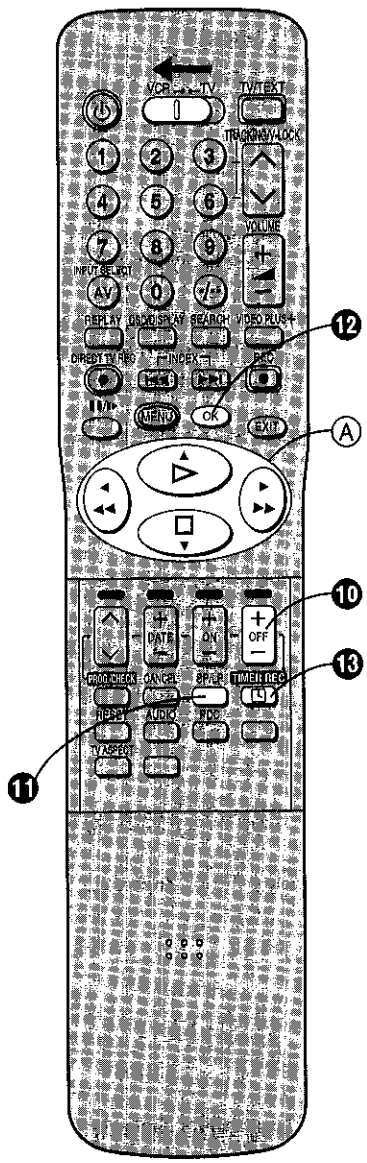
**Example:**
Programming the timer recording of a TV programme broadcast on programme position (channel) 2 from 20:00 to 21:30 on 27 October.




| Operation Steps | Confirmation of Operation |
|---|---|
| ❶ **Switch the TV on.** | |
| ❷ **Press the Power button (⏻/I) to switch the VCR on.** | |
| ❸ **Select the AV input on your TV.**<br>• If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV. | TV screen<br>  <br><br>This indication may be different on your TV. |
| ❹ **Set the VCR/TV switch to "VCR".** | |
| ❺ **Insert a video cassette with an intact erasure prevention tab. (See page 26.)** | VCR display<br> <br><br>Indication when the video cassette is inserted |
| ❻ **Press the PROG./CHECK button to display the menu for programming timer recordings on the TV screen.**<br>• Alternatively, you can press the MENU button Ⓐ and then select "Timer record". | On Screen Display<br>  <br><br>Menu for programming timer recordings |
| ❼ **Press the Channel button (∨) or (∧) to select the programme position of the desired TV station.** |  <br><br>Indication when programme position 2 is set |
| ❽ **Press the DATE button to set the date on which the TV programme will be broadcast.** |  <br><br>Indication when 27/10 is set |
| ❾ **Press the ON button to set the starting time.** |  <br><br>Indication when 20:00 is set |

(continues on the next page)

# Timer Recording Continued...




| Operation Steps | Confirmation of Operation |
|---|---|
| ⑩ **Press the OFF button to set the ending time.** | On Screen Display<br>Timer recording<br>Pos Name DATE Start ON Stop OFF SP LP PDC Min<br>BBC2 27/10 We 20.00 21:30 SP OFF 90<br>Indication when 21:30 is set |
| ⑪ **Press the SP/LP button to set the desired tape speed.**<br>• SP provides standard recording time and optimum picture quality. LP provides doubled recording time with slightly reduced picture quality. Regarding the "A" indication, refer to page 33. | Timer recording<br>Pos Name DATE Start ON Stop OFF SP LP PDC Min<br>BBC2 27/10 We 20.00 21:30 SP OFF 90<br>Indication when SP is set |
| ⑫ **Press the OK button to conclude the settings.**<br>• To programme additional timer recordings, repeat operation steps ❼-⑫. | Timer recording<br>Pos Name DATE Start ON Stop OFF SP LP PDC Min<br>BBC2 27/10 We 20.00 21:30 SP OFF 90<br>Indication when the settings are concluded |
| ⑬ **Press the TIMER REC button to switch the VCR over to the timer recording standby mode.**<br>• At the programmed date and time, the recording will start automatically. | VCR display<br>21:00<br>Indication of the timer recording standby mode |

## ◆ To Suspend the Timer Recording Standby Mode

When you want to use the VCR for playback, normal recording or some other operation before the programmed timer recording will be performed, you can temporarily suspend the timer recording standby mode by pressing the TIMER REC button so that the "⏲" indication
on the VCR display disappears.

However, after you have finished using the VCR, be sure to reactivate the timer recording standby mode by pressing the TIMER REC button again, otherwise the programmed
timer recording will not be performed.

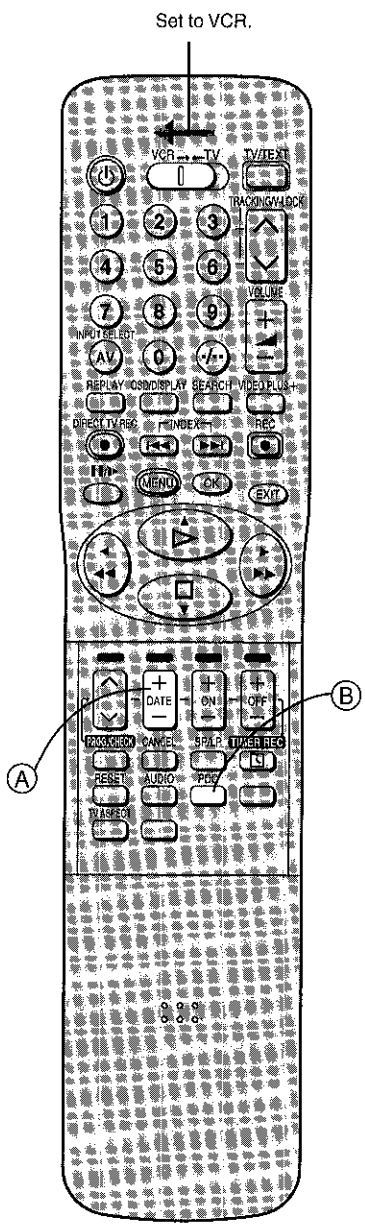
The indication of the timer recording standby mode disappears

**Hints:**

- When you set the starting or ending times, keeping the ON or OFF button pressed changes the indication in 30-minute steps.
- After programming a timer recording, confirm that the "⏲" indication is displayed on the VCR display. If the "⏲" indication is flashing, check the timer programming contents and programme it again correctly.
- If the VCR is not put in the timer recording standby mode at the latest 10 minutes before the programmed timer recording starting time, the "⏲" indication flashes on the VCR display. In this case, press the TIMER REC button to put the VCR in the timer recording standby mode.
- Performing the operation steps ❽-⑪ with the Cursor buttons (▲▼◄►) Ⓐ is also possible.

# Timer Recording and Other Convenient Functions

This VCR is equipped with the following functions that facilitate the programming of timer recordings.
① Setting the recording date/day(s)
② Setting for control of the recording start and end time by special signal included in the broadcasting signal (PDC Function)
③ Ensuring that a TV programme will be recorded until its end (Auto SP/LP Change Function)




## ① Setting the Recording Date/Day(s)

Perform this operation in operation step ⑨ (see page 28) when programming with the Video Plus+ PlusCodes, or in operation step ⑧ (see page 30) when programming a timer recording with the On Screen Display.
You can select the recording date (day of the month/day of the week) by pressing the DATE button Ⓐ. If you repeatedly press the + side of the DATE button, the indication changes in the order shown below. If you press the – side of the DATE button, the indication changes in the opposite order.

- Programming a timer recording (setting the date) is possible up to one month ahead of the TV programme's broadcasting date and time.
  Daily and weekly timer recordings will continue until you cancel them.

<To Programme within 1 Month>
Example: 1 2 ..... 31
↓
<To Programme a Daily Timer Recording>
Example: Daily recording from Sunday to Saturday (Su-Sa).
Daily recording from Monday to Saturday (Mo-Sa).
Daily recording from Monday to Friday (Mo-Fr).
↓
<To Programme a Weekly Timer Recording>
Example: Weekly recording every Sunday Weekly recording every Monday...
Weekly recording every Saturday
(Su = Sunday, Mo = Monday, Tu = Tuesday, We = Wednesday, Th = Thursday, Fr = Friday, Sa = Saturday)

## ② Setting for Control of the Recording Starting and Ending Time by Special Signal Included in the Broadcasting Signal (PDC Function)

PDC stands for Programme Delivery Control.
If a TV programme, for example a football game runs longer than scheduled, is shortened or starts earlier or later, this function synchronises the recording start and stop with the actual broadcasting start and stop of the TV programme.

Conditions for correct operation of the PDC function:

- "ON" must be displayed under "PDC" on the On Screen Display.
- The TV station must broadcast PDC signals.
- The programme starting time must be set correctly to the starting time listed in the newspaper/magazine.

**To Activate the PDC Function:**
In operation step ⑨ (see page 28) when programming with the Video Plus+ PlusCodes, or after operation step ⑪ (see page 31) when programming a timer recording with the On Screen Display, press the PDC button Ⓑ to make the ON indication appear.

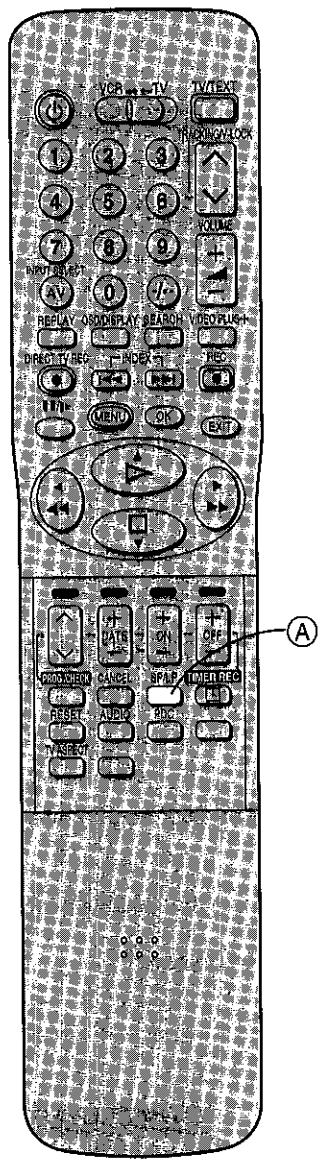
On Screen Display

Timer recording

| Pos. | Name | DATE | Start | ON | Stop | OFF | SP/LP | PDC | Min |
|---|---|---|---|---|---|---|---|---|---|
| BBC2 | | 27/10 We | 20:00 | | 21:30 | | SP | ON | 90 |
| ----- | | --/-- -- | ----- | | ----- | | -- | ---- | --- |
| ----- | | --/-- -- | ----- | | ----- | | -- | ---- | --- |
| ----- | | --/-- -- | ----- | | ----- | | -- | ---- | --- |

Indication when "ON" is selected

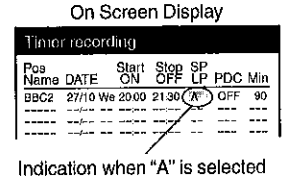
# Timer Recording and Other Convenient Functions Continued...




## ③ Ensuring that a TV Programme Will Be Recorded Until Its End (Auto SP/LP Change Function)

If, at the start of a timer recording, the VCR determines that the remaining tape time is insufficient to record the whole programme, the Auto SP/LP Change function automatically selects LP mode to ensure that the whole programme will be recorded. However, if the remaining tape time is still not sufficient even in the LP mode, the programme cannot be recorded to its end.

On Screen Display




- If you programme a daily or weekly timer recording, recording will be performed in the LP mode from the start regardless of the remaining tape time.
- In case of a timer recording programmed with the PDC function, if the TV programme continues past the programmed ending time, the VCR automatically switches over to the LP mode at that moment. However, in some cases it may not be possible to record the programme until its end.
- Use a video cassette on which a few minutes more than the total length of programmed timer recordings remain, otherwise the programmed timer recordings may be performed in the LP mode.
- Be careful that the broadcast times of the TV programmes set for timer recording do not overlap, otherwise the programmed timer recordings may be performed in the LP mode.
- If the recording speed changes from SP to LP during a timer recording, some brief picture distortion occurs at that point.

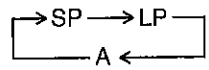
Condition for correct operation of the Auto SP/LP Change function:

- The tape length of the inserted cassette must be set correctly.

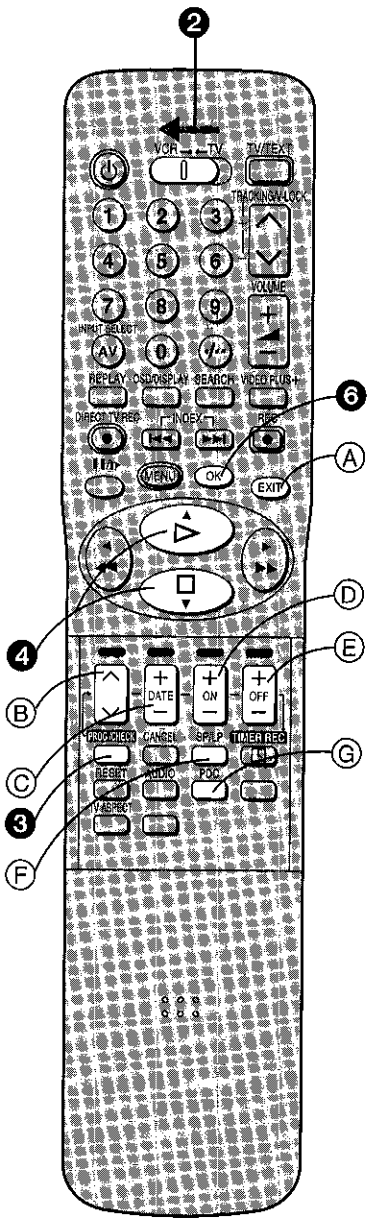
**To Activate the Auto SP/LP Change Function:**

In operation step ❾ (See page 28) when programming with the Video Plus+ PlusCodes, or in operation step ⓫ (See page 31) when programming a timer recording with the On Screen Display, press the SP/LP button Ⓐ to select "A".

- When you press this button repeatedly, the indication changes in the following order:



# Checking, Changing or Cancelling a Timer Recording Programme




## ◆ To Check the Contents of Timer Recording Programmes

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the PROG./CHECK button to display the timer recording programmings on the TV screen.
- When the VCR is in the timer recording standby mode for a PDC recording, the On Screen Display may be distorted.

On Screen Display

Timer recording

| Pos | Name | DATE | Start ON | Stop OFF | SP LP | PDC | Min |
|---|---|---|---|---|---|---|---|
| BBC2 | | 27/10 We | 20:00 | 21:30 | SP | ON | 90 |
| BBC1 | | 30/10 Sa | 19:00 | 20:00 | LP | OFF | 60 |
| SKY G | | Su | 21:00 | 23:00 | SP | --- | 120 |
| BBC2 | | Su-Sa | 17:30 | 18:00 | LP | ON | 30 |

Menu for checking the timer recording programming(s)

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

## ◆ To Change a Timer Recording Programme

It is not possible to change a programme while the timer recording is being performed.

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the PROG./CHECK button to display the timer recording programmes on the TV screen.

❹ Press the Cursor buttons (▲▼) to select the programming that you want to change.

❺ Follow the operations below to change the programmed contents.
To change the broadcasting station:
Use the Channel buttons (∨∧) Ⓑ.
To change the date of the timer recording:
Use the DATE button Ⓒ.
To change the recording starting time:
Use the ON button Ⓓ.
To change the recording ending time:
Use the OFF button Ⓔ.
To change the recording speed:
Use the SP/LP button Ⓕ.
To change the setting for PDC ON/OFF(---):
Use the PDC button Ⓖ.

Timer recording

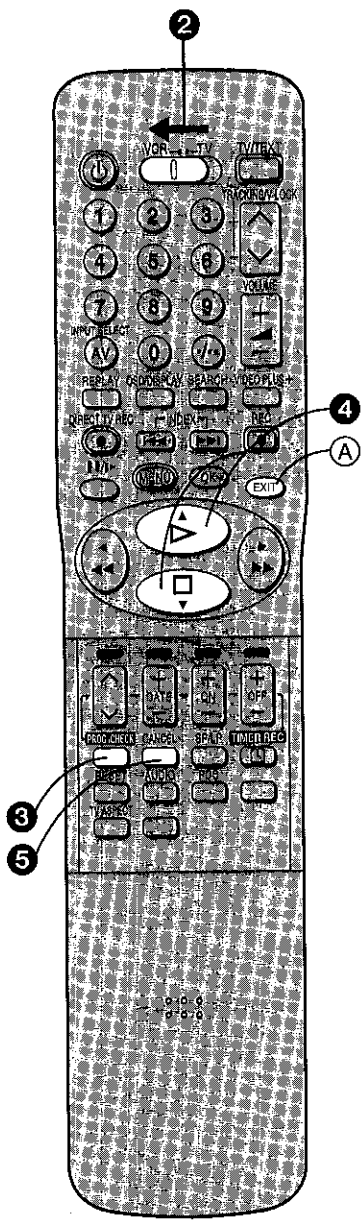
| Pos | Name | DATE | Start ON | Stop OFF | SP LP | PDC | Min |
|---|---|---|---|---|---|---|---|
| BBC2 | | 27/10 We | 20:00 | 21:30 | SP | ON | 90 |
| BBC1 | | 30/10 Sa | 19:00 | 20:00 | LP | OFF | 60 |
| SKY G | | Su | 21:00 | 22:30 | SP | --- | 90 |
| BBC2 | | Su-Sa | 17:30 | 18:00 | LP | ON | 30 |

Menu for changing the timer recording programming(s)

❻ Press the OK button to conclude the setting.

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

# Checking, Changing or Cancelling a Timer Recording Programme Continued...




## ◆ To Cancel the Programming of a Timer Recording

It is not possible to cancel a programme while the timer recording is being performed.

❶ Display the VCR picture on the TV.

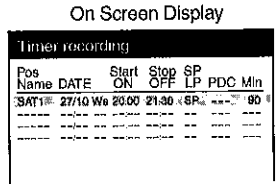
❷ Set the VCR/TV switch to "VCR".

❸ Press the PROG./CHECK button to display the timer recording programmings on the TV screen.

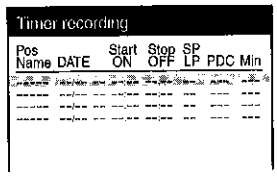
❹ Press the Cursor buttons (▲▼) to select the programming that you want to cancel.

❺ Press the CANCEL button.

On Screen Display




Menu when the programme to cancel is selected



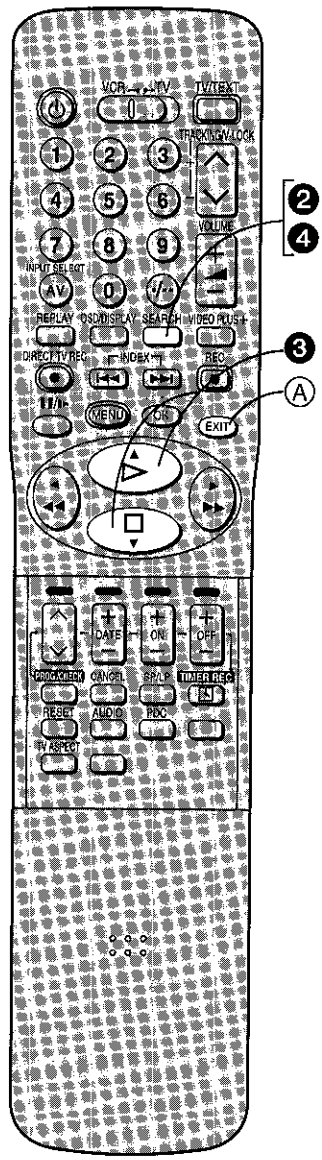

Menu after the programming has been cancelled

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

**Notes for Cancelling the Programming of a Timer Recording:**
In some cases, for example as listed below, the programming of a timer recording remains stored in the memory until 4 a.m. the next day. However, this is not a malfunction.

- When a timer recording was not performed up to the TV programme's ending time because the remaining tape time was not sufficient.
- When you have stopped the timer recording while it was being performed.

# Checking, Changing or Cancelling a Programmed Timer Recording Continued...




## To Select a Timer-Recorded Programme from the List and Quickly Locate Its Beginning for Automatic Playback (Timer Record Confirmation)

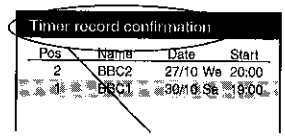
This VCR can display a list of the timer-recorded programmes on the inserted video cassette on the TV screen. You can then select the desired programme, and the VCR will quickly locate its beginning and start playback.

Conditions for correct operation of the Timer Record Confirmation function:
- The video cassette must not have been ejected after the timer recordings were performed.
- The tape length of the inserted cassette must be set correctly.
- The VCR must not be in the timer recording standby mode.
- A programme of at least 15 minutes must be recorded on the tape.
- If a timer recording was performed onto a recorded video cassette, the previous recording must have been completely erased by the new recording.

❶ Display the VCR picture on the TV.

❷ Press the SEARCH button to display the Timer Record Confirmation menu.

On Screen Display




Timer record confirmation menu

❸ Press the Cursor buttons (▲▼) to select the programme that you want to locate and play back.

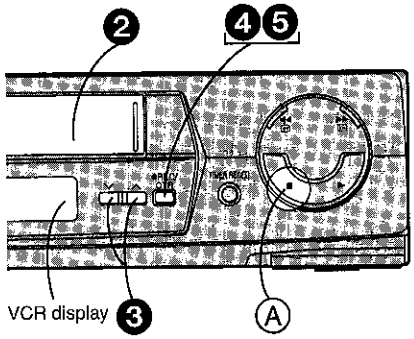
❹ Press the SEARCH button to start the search for the beginning of the selected programme.
- After the desired recorded programme has been found, playback starts automatically.
- If, after playback has started, you want to search for the beginning of the same or another programme, press the SEARCH button.
  Playback stops, and the Timer Record Confirmation menu appears.
  Repeat the above operations steps ❸-❹.

**To Cancel the Timer Record Confirmation Function:**
Press the EXIT button Ⓐ.

**Hints:**
- When you press the SEARCH button in the above operation step ❷, the last timer-recorded programme is selected (highlighted).
- If you take out the cassette or insert another cassette after a timer recording has finished, pressing the SEARCH button activates the Intro-Jet Scan instead of the Timer Record Confirmation. (Refer to page 39.)

# Convenient One Touch Recording Function (OTR Recording)

## To Select the Recording Duration and Perform Timer Recording




The OTR (One-Touch Recording) is the easiest timer recording method. It is called this, because you can start recording and select the recording duration by repeatedly pressing a single button. This is very convenient, for example when you want to start recording immediately but need to go out or want to go to bed.
After the selected recording duration has elapsed, recording stops and the VCR automatically switches off.

**To Perform an OTR Recording:**

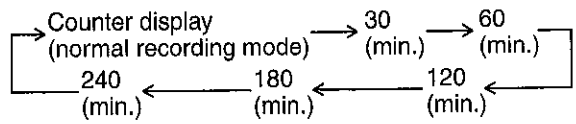
❶ Display the VCR picture on the TV.

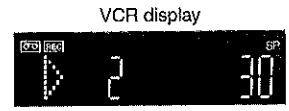
❷ Insert a video cassette with an intact erasure prevention tab.

❸ Press the Channel buttons (∨∧) to select the programme position on which the TV programme to be recorded will be broadcast.

❹ Press the REC/OTR button to start recording.

❺ Press the REC/OTR button repeatedly to select the desired recording duration.
- Every time you press this button, the recording duration indicated in the VCR display changes in the following order.
- For example, if you select "30", the VCR records a programme from that moment on for 30 minutes.



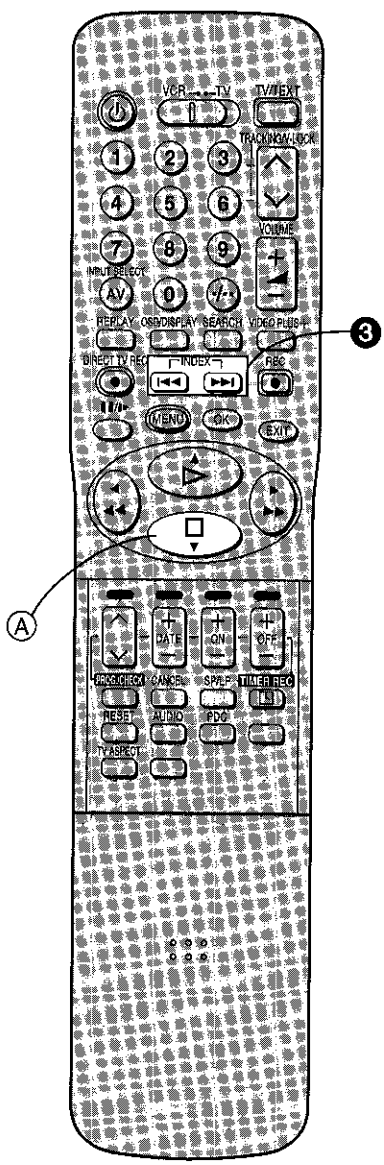
Indication when recording duration "30" is selected

**To Stop the OTR Recording Before the End:**
Press the Stop button (■) Ⓐ.



**Note:**
- This function also works during Direct TV Recording.

# Search Functions




## To Quickly Find the Beginning of a Desired Programme (VISS: Video Index Search System)

This VCR automatically records special index signals on the tape every time a recording is started. The Index search function makes use of these index signals to let you find the beginning of a desired programme quickly and easily.

Index signals are automatically recorded in the following cases:
- When you start a recording by pressing the REC button, REC/OTR button, or DIRECT TV REC button.
- When a timer recording starts.
- When you press the REC button on the remote control during recording.

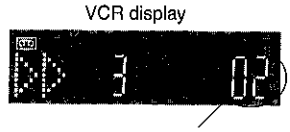
Conditions for correct operation of the Index search function:
- The VCR must be in the stop mode or in the playback mode.
- Each programme recorded on the tape must be at least 5 minutes long.

❶ Display the VCR picture on the TV.

❷ Insert a cassette recorded on this VCR.

❸ Press the INDEX button (that corresponds to the direction from the current tape position in which the desired programme is located on the tape) to start the index search. For example, if you want to search for the 2nd recorded programme in forward direction, press the INDEX ▶▶I button twice. (Read the hint at the bottom of the page.)
- The VCR fast-forwards or rewinds the tape and searches for the specified index signal (the beginning of the desired recorded programme). When it has been found, playback starts automatically.

VCR display



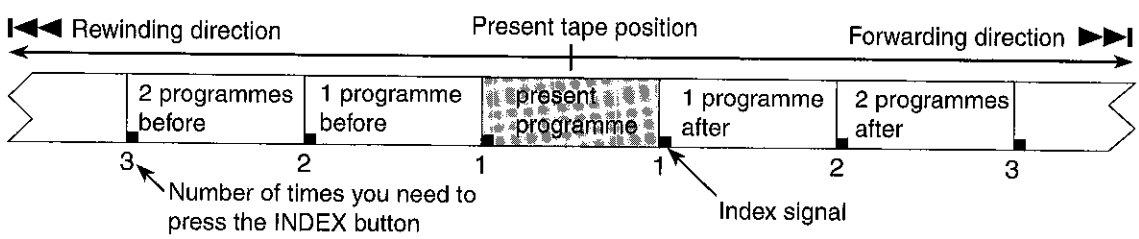

Indication when the SEARCH button has been pressed twice

**To Cancel the Index Search or to Stop Playback:**
Press the Stop button (□) Ⓐ.

**Hints:**

**How to Specify the Programme that You Want to Locate and Playback**

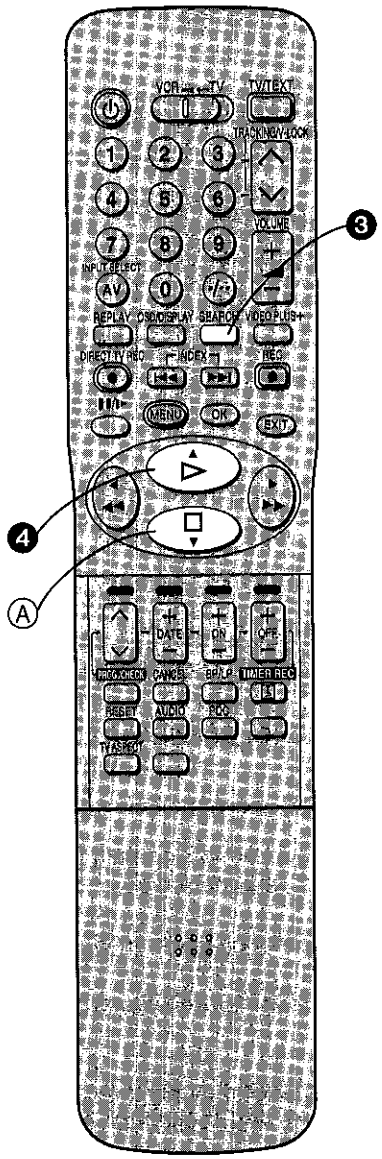
The illustration below shows the relationship between the index signal to be searched and number of times you need to press the ▶▶I or I◀◀ INDEX button.
- Searching in either direction is possible up to the 20th index signal.
- If you press either of the INDEX buttons too many times, simply press the other INDEX button (indicating the opposite direction) to correct it. In this way, you can reduce the displayed figure down to 1.
- The figure on the VCR display decreases by 1 every time an index signal is located.



# Search Functions Continued...

## To Search for a Desired Programme While Checking the Recorded Contents on a Cassette (Intro-Jet Scan)

This VCR automatically records special index signals on the tape every time a recording starts. The Intro-Jet Scan function makes use of these index signals to play back the beginning of each programme recorded on the cassette one after another at high speed. This lets you quickly and easily check the contents of a cassette and find a desired programme.




Index signals are automatically recorded in the following cases:
- When you start a recording by pressing the REC button, the REC/OTR button or the DIRECT TV REC button.
- When a timer recording starts.
- When you press the REC button on the remote control during recording.

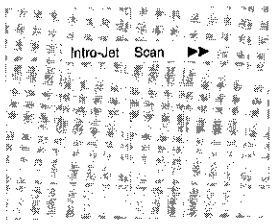
Conditions for correct operation of the Intro-Jet Scan function:
- The cassette must have been ejected after the timer recordings were performed.
- VCR must be switched on (ON), be in the playback mode or be in the standby mode (OFF).
- Each programme recorded on the tape must be at least 15 minutes long.

❶ Display the VCR picture on the TV.

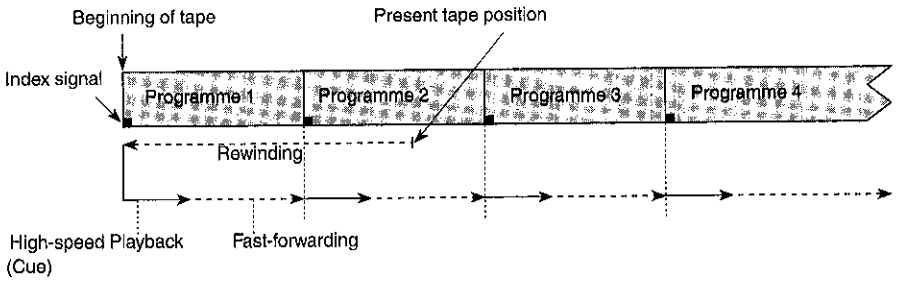
❷ Insert a cassette recorded on this VCR.

❸ Press the SEARCH button to start the Intro-Jet Scan.
- After rewinding the tape to the beginning, the VCR plays it back at high speed for approximately 10 seconds. It then fast-forwards the tape to the next tape position marked by an index signal (beginning of a programme), and every time an index signal is found, the VCR switches over to high-speed playback (Cue) for about 10 seconds.

On Screen Display




Indication of Intro-Jet Scan




❹ When you have found the programme that you want to view, press the Play button (▷) to start normal playback.

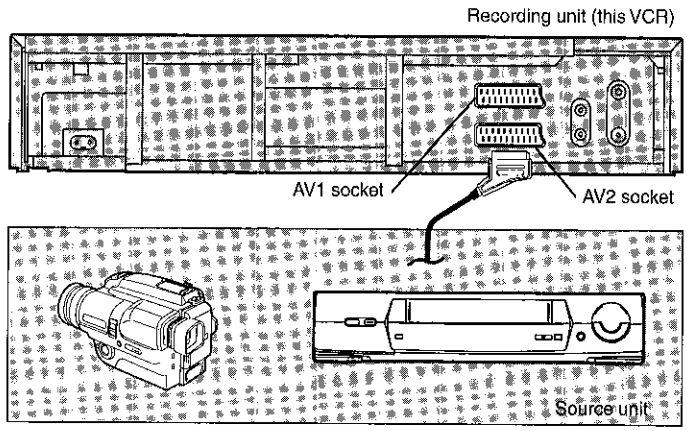
**To Cancel the Intro-Jet Scan or to Stop Playback:**
Press the Stop button (□) Ⓐ.

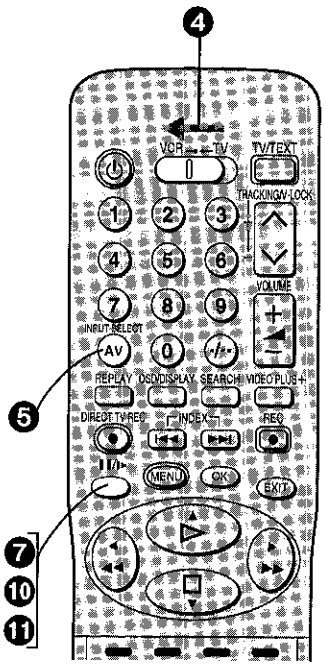
**Note:**
If you press the SEARCH button after a timer recording has finished, but before ejecting that cassette, the Timer Record Confirmation (for details, see page 36) will be activated instead of the Intro-Jet Scan.

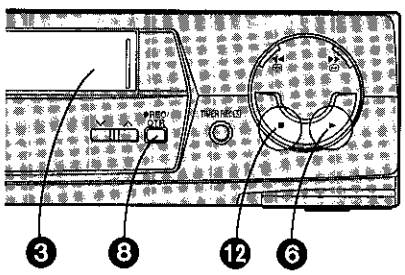
# Editing with your VCR

## Assemble Editing

The assemble editing function makes it easy to record the picture and sound of virtually any number of scenes or programmes in succession with smooth, noise-free transitions between them.
Assemble editing from an external source, for example from a movie camera, can be performed in the same way.



❶ Connect a video movie camera or a VCR to this VCR with an audio/video cable or a 21-pin Scart cable, as shown in the illustration.

❷ Display the VCR picture on the TV.

❸ Insert the cassette on which the assemble editing is to be performed, and make sure that its erasure prevention tab is not broken out.

❹ Set the VCR/TV switch to "VCR".

❺ Press the INPUT SELECT button to select the AV Input (external input) "A1" or "A2" according to the socket on the VCR to which the source unit has been connected.

A1: When connected to the AV1 21-pin Scart socket [AV1 (TV)]
A2: When connected to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)]

❻ Press the Play button (▶) on this VCR to start playback.

❼ At the point where you want to join a new scene, press the Pause/Slow button (❚❚/▸) on the remote control of this VCR to put it in the still playback mode.

❽ Press the REC/OTR button on this VCR to put it in the recording pause mode.

❾ Start playback on the source unit and search for the point from which you want to record (copy) onto this VCR.

❿ When that point is reached, press the Pause/Slow button (❚❚/▸) on the remote control of this VCR again to start recording the new picture and sound from the playback unit.

⓫ To record (copy) additional scenes, press the Pause/Slow button (❚❚/▸) to put this VCR in the recording pause mode and then perform above steps ❾ and ❿ again.

⓬ At the point where you want to stop recording, press the Stop button (■) to finish recording.

**Hint:**
The new sound is recorded on both the hi-fi audio tracks and the normal audio track. The sound recorded on the normal audio track is always in mono.

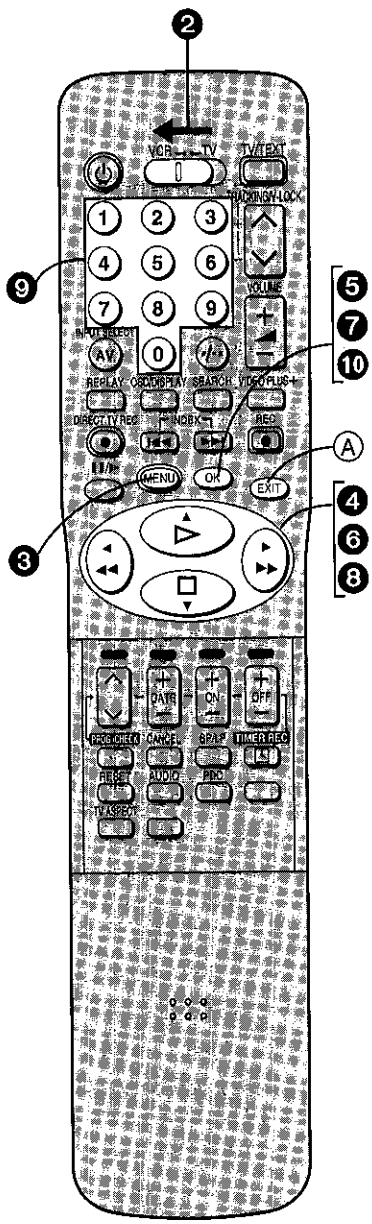
**Note:**
If you leave the VCR in the recording pause mode for more than 5 minutes in step ❽ or ⓫, the VCR automatically switches over to the stop mode to protect the video heads.

# Manual Tuning

This VCR has 99 programme positions that can be preset to receive TV stations.
Usually, if you switch the VCR on for the first time after making the necessary connections, the VCR will start the Download or Auto Setup function automatically so that all available TV stations in the area can be received.
However, if Auto Setup is not successful due to extraordinary transmission circumstances, or if you want to change the name of a TV station or change a TV station from its regular programme position to one of your preference, you can set it up manually. This is called Manual Tuning.
If download is performed after you have used manual tuning to change the settings then the changes that you made may be lost. In this case make the changes again using manual tuning. However for Direct TV Record to work correctly (Q Link) then the programme settings of the TV and VCR must be the same. To ensure this, make the desired programme setting changes to the TV first and then perform download to the VCR. Refer to the TV operating instructions for further details.

Manual Tuning can be used for the following:

① To change the order in which the TV stations are assigned to the programme positions
② To enter or change the name of a TV station
③ To enter newly available TV stations
④ To select the type of sound to be recorded
⑤ Making changes to the programme list (stored on the programme positions of the VCR)
- To delete a programme position
- To insert a blank programme position
- To move a TV station to another programme position




## ① To Change the Order in Which the TV Stations Are Assigned to the Programme Positions

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

❹ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Manual" in this order.

❺ Press the OK button to display the list of tuned TV stations.

❻ Press the Cursor buttons (▲▼◄►) to select the TV station that you want to assign to a different programme position.

❼ Press the OK button to display the Manual Tuning menu.

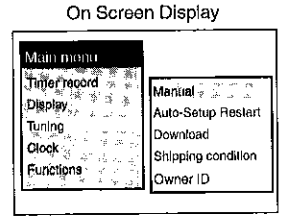
❽ Press the Cursor buttons (▲▼◄►) to select the entry field for "Pos:".

❾ Press the Numeric buttons to enter the number of the desired programme position.

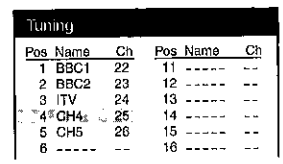
❿ Press the OK button to conclude the setting.

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

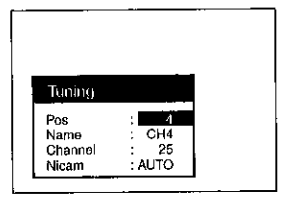
On Screen Display




Indication when Manual is selected

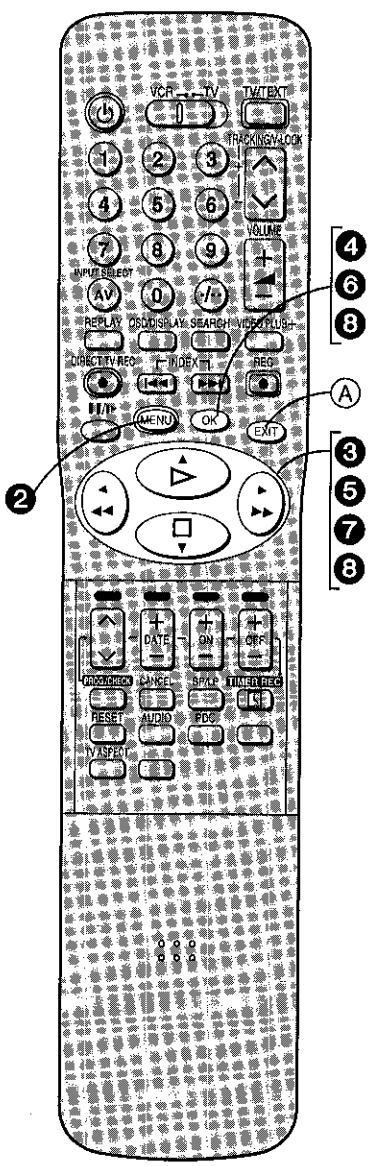



List of tuned TV stations




Manual Tuning menu

# Manual Tuning Continued...



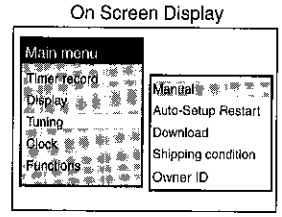

## ② To Enter or Change the Name of a TV Station

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

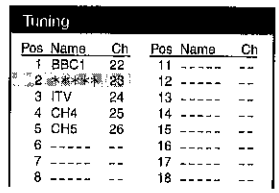
❸ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Manual" in this order.

On Screen Display




Indication when Manual is selected

❹ Press the OK button to display the list of tuned TV stations.



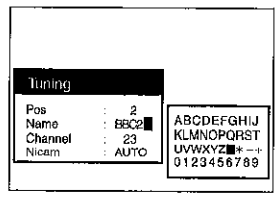

List of tuned TV stations

❺ Press the Cursor buttons (▲▼◄►) to select a programme position whose TV station name is indicated as ＊＊＊＊＊.

❻ Press the OK button to display the Manual Tuning menu.

❼ Press the Cursor buttons (▲▼◄►) to select the entry field for "Name:".
- The character list appears.

❽ Use the Cursor buttons (▲▼◄►) and OK button to enter the station name.
- If the station name needs a blank space, select the blank between "Z" and "＊".

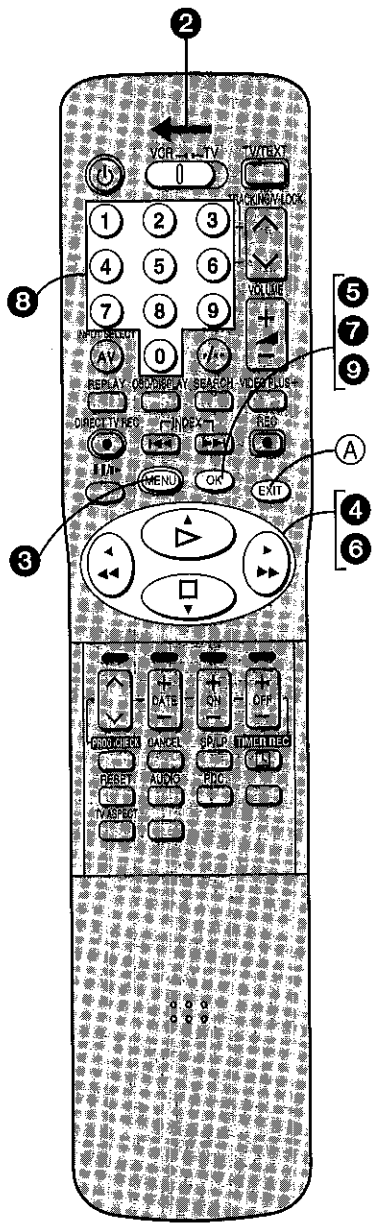



Manual Tuning menu (when the character list is displayed)

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

**Hint:**
- If you want to abort the entering or changing of the TV station name in step ❽ above, press the EXIT button. However, as the characters that you have entered are stored as the station name, be sure to enter the correct name.

# Manual Tuning Continued...




## ③ To Enter Newly Available TV Stations

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

❹ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Manual" in this order.

❺ Press the OK button to display the list of tuned TV stations.

❻ Press the Cursor buttons (▲▼◄►) to select an unused programme position.

❼ Press the OK button to display the Manual Tuning menu.
- "21" is selected for the item "Channel".

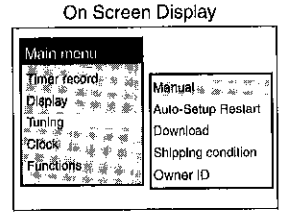
❽ Press the Numeric buttons to enter the channel number of the desired TV station.

❾ Press the OK button to conclude the setting.

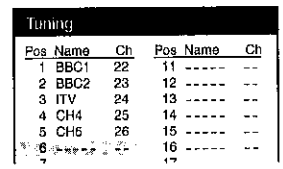
**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

**To Change the Channel Number of an Already Tuned TV Station:**
You can change it in the same way as explained above. However, in step ❻ select the programme position of the TV station that you want to change to another channel number, and after pressing the OK button in step ❼, use the Cursor buttons (▲▼◄►) to select the entry field for "Channel".

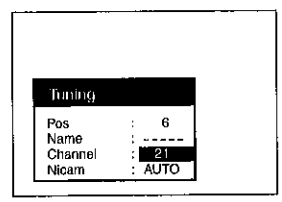
On Screen Display




Indication when Manual is selected

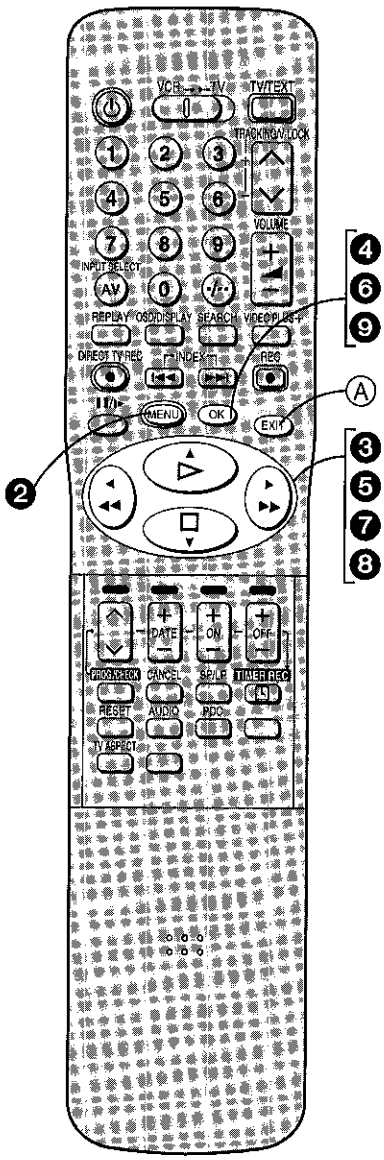



List of tuned TV stations




Manual Tuning menu

# Manual Tuning Continued...




## ④ To Select the Type of Sound to Be Heard/Recorded

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Manual" in this order.

❹ Press the OK button to display the list of tuned TV stations.

❺ Press the Cursor buttons (▲▼◄►) to select the desired TV station.

❻ Press the OK button to display the Manual Tuning menu.

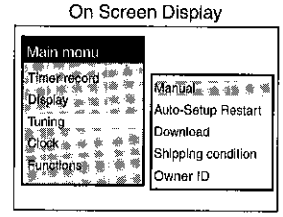
❼ Press the Cursor buttons (▲▼◄►) to select the entry field for "Nicam:".

❽ Press the Cursor buttons (▲▼) to select AUTO.
- When you record a programme which is broadcast with Nicam sound, the Nicam sound is automatically recorded.
- Select "OFF" if you want to record the normal (mono) sound on the hi-fi audio tracks during a Nicam broadcast, or if the sound is distorted due to inferior Nicam reception conditions.

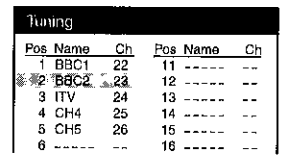
❾ Press the OK button to conclude the setting.

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

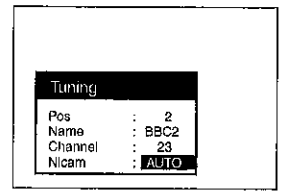
On Screen Display




Indication when Manual is selected




List of tuned TV stations



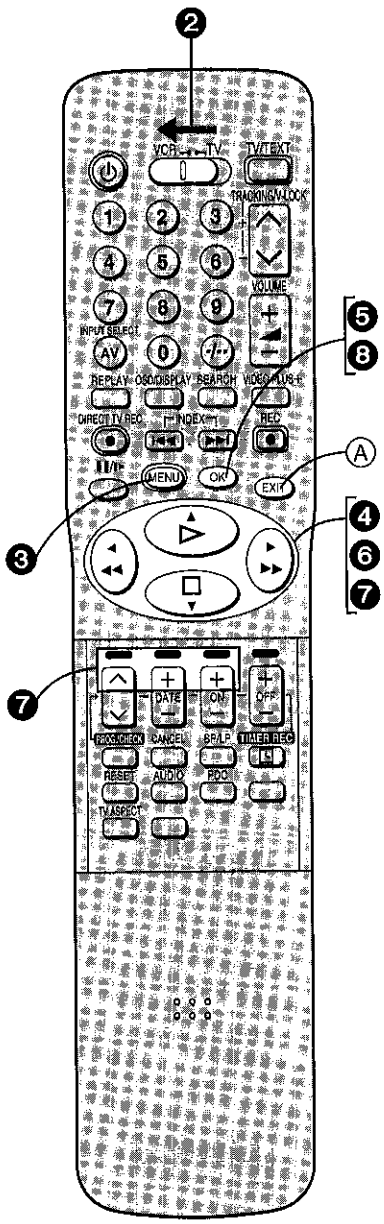

Manual Tuning menu

# Manual Tuning Continued...

## ⑤ Making changes to the programme list (stored on the programme positions of the VCR)

- To delete a programme position
- To insert a blank programme position
- To move a TV station to another programme position

Use the coloured instruction indications displayed below the list of tuned TV stations and the corresponding coloured buttons.
If downloading of the setup data has been performed, only the instruction indication "Delete" appears.

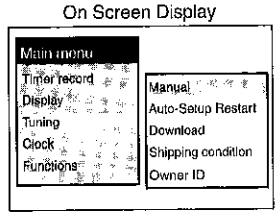



❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

On Screen Display

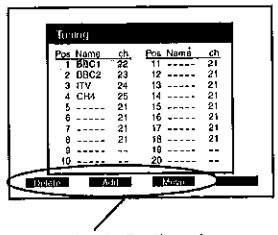



Indication when Manual is selected

❹ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

❺ Press the OK button to display the list of tuned TV stations.

❻ Press the Cursor buttons (▲▼◀▶) to select the desired TV station.




Instruction indications for Delete, Add and Move

❼ Follow the operations below.
To delete a programme position (Delete):
Press the Channel button (∧, red).
To insert a blank programme position (Add):
Press the Date button (+, green).
To move a TV station to another programme position:
Press the ON button (+, yellow), and then use the Cursor buttons (▲▼) to select the new programme position to which you want to assign the TV station.

❽ Press the OK button to conclude the setting.

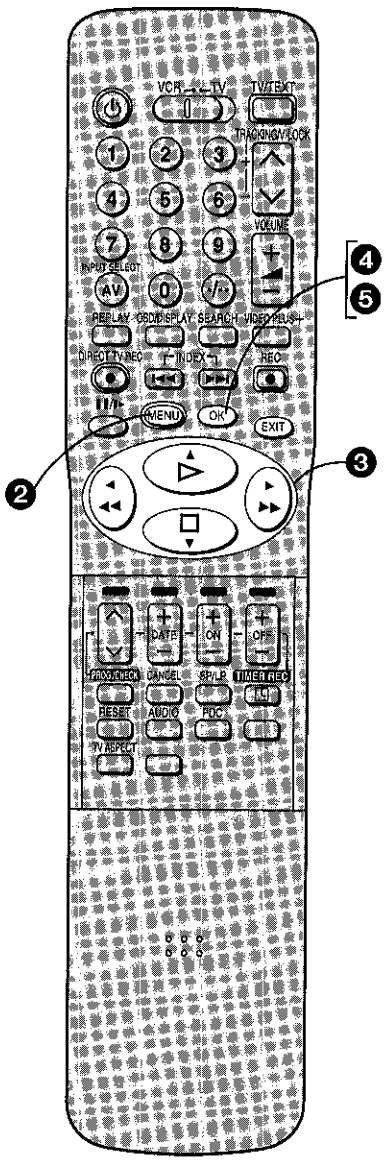
**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

Manual Setup

**Hint:**
- If you have performed Manual Tuning to enter TV stations, the "——" indication may appear under "Pos/Name" on the On Screen Display when programming a Video Plus+ timer recording.

# Restarting the Auto Setup or Download (Q Link)

Performing Auto Setup or Download (Q Link) automatically tunes all TV stations available in your area for the VCR. Restarting this function is convenient when you move to another area and may need to set up the VCR again.




## ◆ To Restart the Auto Setup

To perform the Auto Setup again, follow the operation steps below.

❶ Display the VCR picture on the TV.

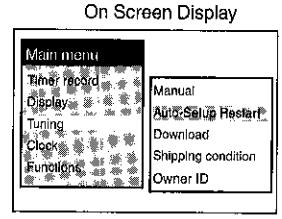
❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Auto-Setup Restart" in this order.

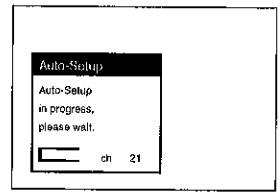
❹ Press the OK button to prepare for Auto Setup start.

❺ Press the OK button again to actually start the Auto Setup.

On Screen Display




Indication when Auto-Setup Restart is selected




Indication when Auto-Setup has started

## ◆ To Restart the Download (Q Link)

To perform the Download again, follow the operation steps below.

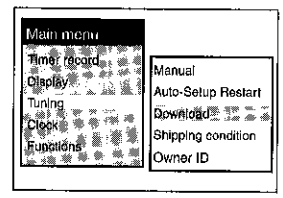
❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

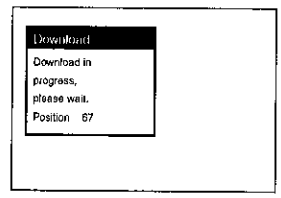
❸ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Download" in this order.

❹ Press the OK button to prepare for Download start.

❺ Press the OK button again to actually start the Download.

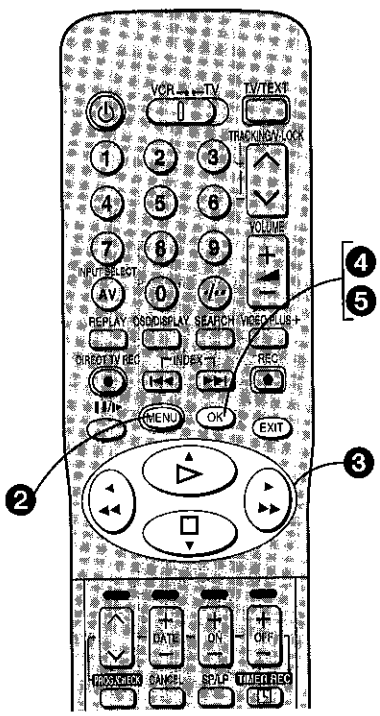



Indication when Download is selected




Indication when Download has started

# Resetting the VCR to the Shipping Condition/ Changing the Owner ID



## ◆ To Return the VCR to the Shipping Condition

If you want to reset the VCR to the factory preset condition, follow the operation steps below.

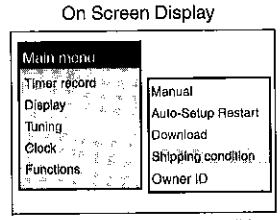
❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Shipping condition" in this order.

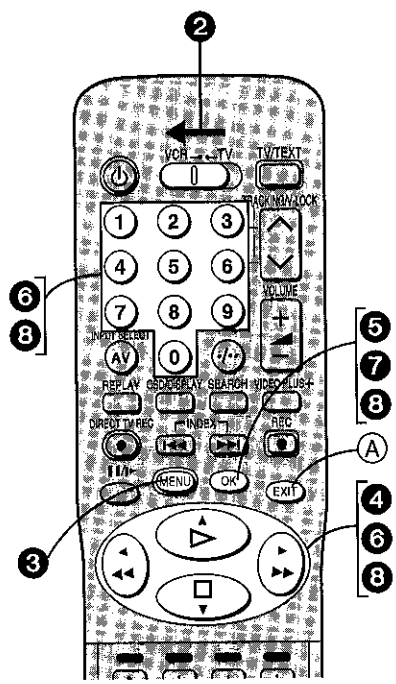
❹ Press the OK button to prepare for resetting the VCR to the shipping condition.

On Screen Display




Screen when Shipping condition is selected

❺ Press the OK button two more times to actually change the settings back to the shipping condition.
- As resetting the VCR to the shipping condition automatically resets the RF output channel to channel 21, the VCR picture may no longer appear on the TV.
- To re-tune the VCR, disconnect and reconnect the AC Mains Cable.



## ◆ To Change the Owner ID

If you want to change the Owner ID because the owner of the VCR or your address has changed, follow the operation steps below.

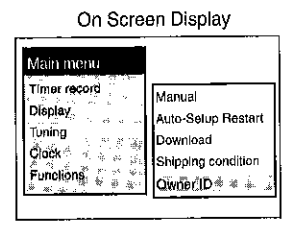
❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

❹ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Owner ID" in this order.

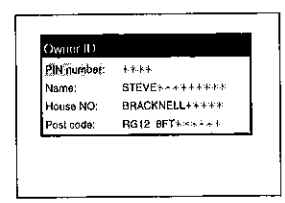
On Screen Display




Indication when Owner ID is selected

❺ Press the OK button to display the Owner ID setting menu.

❻ Use the Cursor button (▶) and Numeric buttons to enter the current PIN number.
- After entering the correct PIN number, you can change the Name, House No. and Postcode.




Menu for Owner ID setting

❼ Press the OK button to conclude the setting.

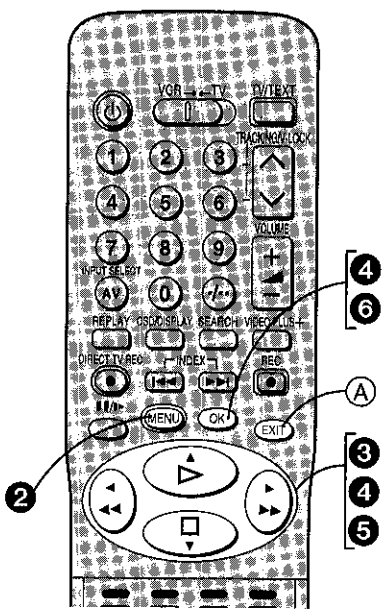
❽ Use the Cursor buttons (▲▼◀▶), Numeric buttons and the OK button to select and change the desired information.

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

**To display the Owner ID screen**
Keep the EJECT button pressed for more than 5 seconds.
- However, the PIN number is not displayed.
- After 30 seconds, this screen automatically disappears.

# Setting the VCR's Clock

Usually, the VCR's Auto Setup or Download function automatically adjusts the clock to the correct time.
Under some reception conditions, however, the VCR cannot set the clock automatically.
In this case, follow the operation steps below to manually set the clock.




## ◆ To Manually Adjust the Clock

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

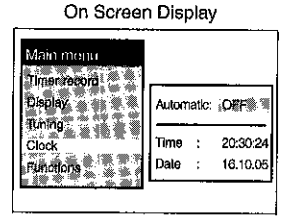
❸ Press the Cursor buttons (▲▼) to select "Clock".
- The Clock setting menu appears on the TV.

❹ Use the Cursor button (▶) to move to the Clock setting menu, confirm that "Automatic" is set to OFF, and then press the "OK" button.

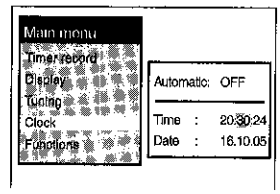
❺ Use the Cursor buttons (▲▼◀▶) to set the date and time.

❻ Press the OK button to conclude the setting.

On Screen Display




Indication when "Automatic" is set to "OFF"

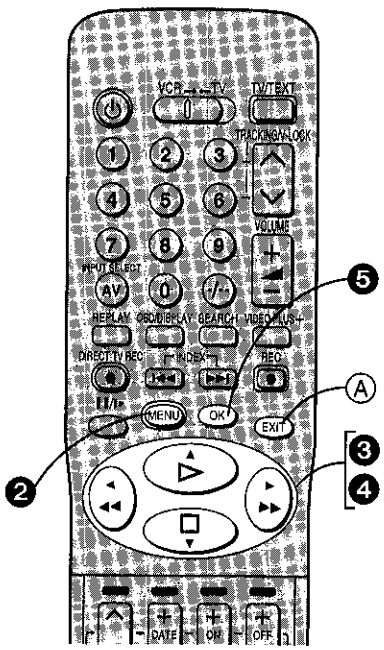



Screen for minute adjustment

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

## ◆ To Activate the Automatic Time Correction Function

If a TV station transmits a signal for time setting, performing the operation steps below activates the Automatic time correction function and the time is corrected automatically.



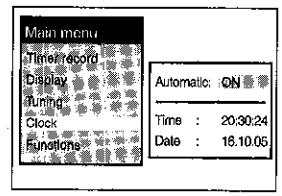

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼) to select "Clock".
- The Clock setting menu appears on the TV.

❹ Use the Cursor button (▶) to move to the Clock setting menu, and then use the Cursor buttons (▲▼) to set "Automatic" to "ON".

❺ Press the OK button to conclude the setting.
- Under adverse reception conditions, etc., the Automatic time correction function may not work. In this case, the indication for "Automatic" is automatically reset to "OFF". If the reception conditions improve later on, it may be possible to activate this function.




Indication when "Automatic" is "ON"

**To Exit the On Screen Display:**
Press the EXIT button .

**Hints:**
- If "Automatic" is set to "ON" when you open the Clock setting menu, do not set it to "OFF", otherwise, the automatic time correcting function is deactivated.
- The built-in clock employs the 24-hour system.
- In case of a power failure, an automatic back-up system automatically maintains the operation of the clock for at least 60 minutes.
- When "Automatic" on the Clock setting menu is set to "ON", the automatic time correction function checks and if necessary adjusts the time every day. The automatic time correction function only works when the VCR is switched off; it does not work in the timer recording standby mode.

# Other Convenient Functions

For optimum use of this VCR, various function settings for the items "Display" and "Functions" on the Main menu are explained below and on the following pages.

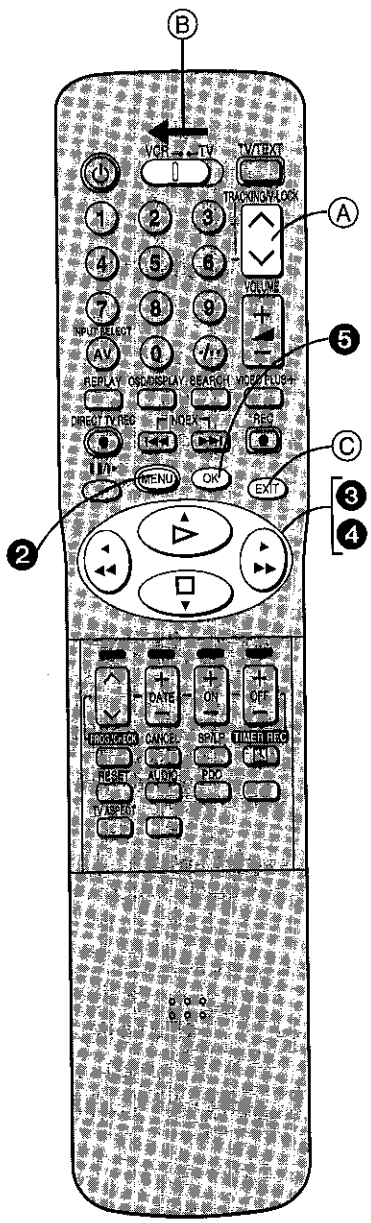
(1) For the Main menu item "Display", the following functions can be selected:
- Automatic display of the Channel Guide on the TV screen each time you change the programme position
- Automatic change of the brightness of the VCR display when the VCR is switched off
- Automatic display on the TV screen of the TV station information, type of sound system of the programme being watched and the sound playback mode

(2) For the Main menu item "Functions", the following settings can be made:
- Setting of the tape length of the cassette being used to ensure correct indication of the remaining tape time
- Setting of the type of external source equipment that is connected to the "AV2" 21-pin Scart socket

To activate the above functions correctly, perform the following operations:

## (1) Settings for the Main Menu Item "Display"

### ◆ For Automatic Display of the Channel Guide on the TV Screen Each Time You Change the Programme Position

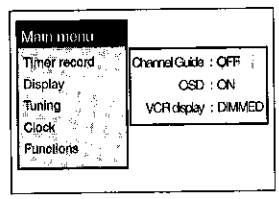



❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

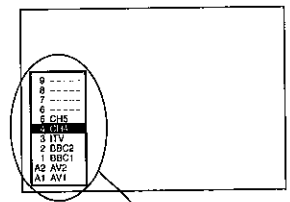
❸ Press the Cursor buttons (▲▼◀▶) to select "Display", "Channel Guide" and "ON" or "OFF" in this order.

On Screen Display




Menu for Display setting

❹ Press the Cursor buttons (▲▼) to select "ON".
- Each time you change the programme position with the Channel button (∨∧) Ⓐ, the Channel Guide indication appears for a few seconds.
  Set the VCR/TV switch to "VCR" Ⓑ.



Channel Guide indication

❺ Press the OK button to conclude the setting.

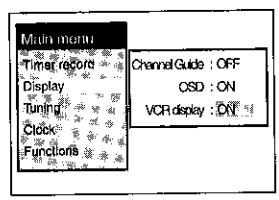
**To Exit the On Screen Display:**
Press the EXIT button Ⓒ.

### ◆ For Automatic Change of the Brightness of the VCR Display When the VCR Is Switched Off

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Display", "VCR display" and "ON" or "DIMMED" in this order.



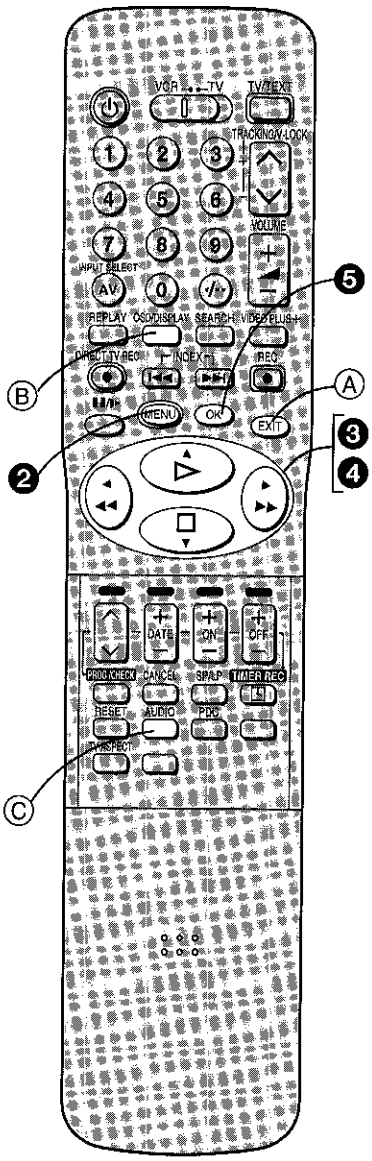

Menu for Display setting

❹ Press the Cursor buttons (▲▼) to select the desired condition.
- When the VCR is switched off, the brightness of the VCR display is as follows:
  ON: Indications are brightly lit.
  DIMMED: Indications are dimly lit.

❺ Press the OK button to conclude the setting.

**To Exit the On Screen Display:**
Press the EXIT button Ⓒ.

# Other Convenient Functions Continued...




## ◆ For Automatic Display on the TV Screen of the TV Station Information, Type of Sound System of the TV Programme Being Watched and the Sound Playback Mode

❶ Display the VCR picture on the TV.

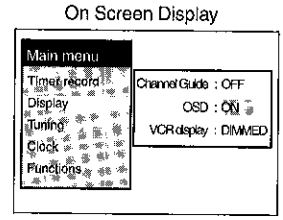
❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Display", "OSD" and "ON" or "OFF" in this order.

❹ Press the Cursor buttons (▲▼) to select "ON".
- The TV station information, type of sound system of the programme being watched and the sound playback mode are displayed on the TV screen.

❺ Press the OK button to conclude the setting.

On Screen Display




Menu for Display setting

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

**Indications that Can Be Displayed on the TV Screen with This Function:**
At a press of the OSD/DISPLAY button Ⓑ, the following indications appear on the TV screen.

① TV station name

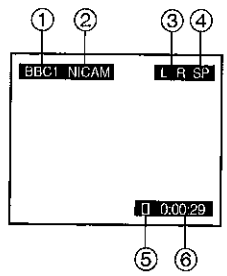
② Automatic indication of the type of sound system in which the programme being watched (NICAM/MONO) is broadcast.
- If NICAM OFF is selected during manual tuning, "MONO" is always displayed.

③ Sound mode during playback (L/R)
At each press of the AUDIO button Ⓒ, the selected playback sound is indicated with L (Left) and R (Right).
Stereo playback:
The L and R indications are displayed.
Left audio channel playback:
The L indication alone is displayed.
Right audio channel playback:
The R indication alone is displayed.
Playback of normal audio track:
Neither L nor R indication is displayed.

④ Tape speed indicator

⑤ Tape running display

| | |
|---|---|
| Stop, Eject | □ |
| Rewind | ◀◀ |
| Fast Forward | ▶▶ |
| Playback | ▷ |
| Recording | ● |
| Repeat Playback | R |




TV screen with displayed indications

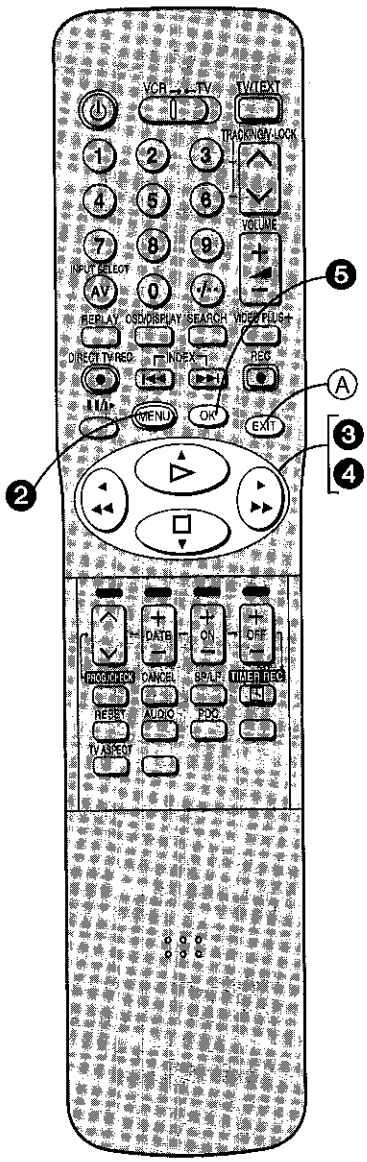
⑥ Present time/Tape counter/Remaining tape time/Index Search/One-Touch Recording (OTR)

| | |
|---|---|
| Present time | 17:24:31 |
| Tape counter | –2:35.47 |
| Remaining tape time | REMAIN 2:34 |
| Index Search | ▶▶ 02 |
| One-Touch Recording (OTR) | OTR 60 |
| Playback Off Timer | 30 |

**Notes:**
- If "OSD" is set to "OFF", none of the above indications appear.
- None of the above indications appear during special playback.
- During playback and when the AV input for the external source is selected, indications ① and ② do not appear.

## (2) Settings for the Main Menu Item "Functions"

### ◆To Set the Tape Length of the Cassette Being Used to Ensure Correct Indication of the Remaining Tape Time




❶ Display the VCR picture on the TV.

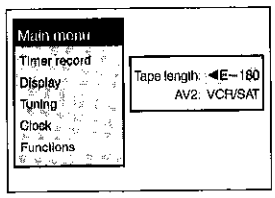
❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Functions", "Tape length" and "◀E-180" in this order.

❹ Press the Cursor buttons (▲▼) to select the tape length of the cassette being used.
◀E-180: For E30, -60, -90, -120 and -180 tapes
E-195: For E195 tape
E-240: For E240 tape
E-260▶: For E260 and -300 tapes

❺ Press the OK button to conclude the setting.

On Screen Display




Menu for Functions setting

**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

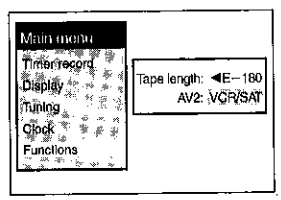
### ◆To Set the Type of External Source Equipment that Is Connected to the AV2 21-pin Scart Socket

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Functions", "AV2" and "VCR/SAT" in this order.

❹ Press the Cursor buttons (▲▼) to select the type of external source equipment which is connected to the VCR's AV2 21-pin socket.
- Set the external source equipment as follows:
  VCR/SAT: When another VCR or a satellite receiver is connected
  DECODER: When a decoder is connected




Menu for Functions setting

❺ Press the OK button to conclude the setting.

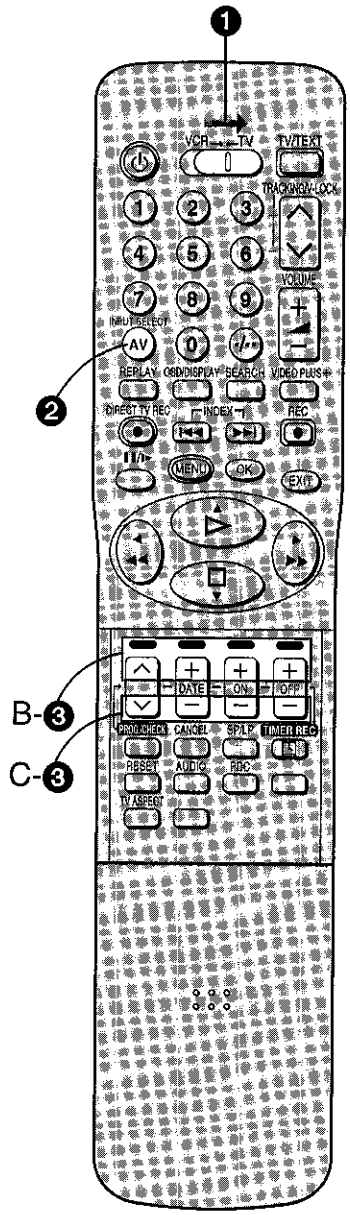
**To Exit the On Screen Display:**
Press the EXIT button Ⓐ.

**Note:**
- Even if you have selected the correct tape length, the remaining tape time may not be indicated correctly with certain kinds of cassettes.

# Using the Remote Control to Operate Your TV

Only Panasonic TVs can be operated with the provided remote control. However, some Panasonic TVs cannot be operated using this remote control.

The settings for operating the TV with the remote control have already been made. No additional settings need to be performed.




## The 3 Methods for Switching to the AV Input on Your Panasonic TV

Your Panasonic TV uses one of three different methods for switching between TV reception and the AV input(s). Perform the operations steps listed for the switching methods A, B and C below to determine which one your Panasonic TV uses.

A

❶ Set the VCR/TV switch to "TV".

❷ Press the AV button to switch to the AV Input.
Each press of the AV button switches between "TV reception" and "AV Input(s)"

B

❶ Set the VCR/TV switch to "TV".

❷ Press the AV button.
Colour bars for selecting the AV Input appear on the TV screen.

❸ Follow the instructions displayed on the TV screen to select the desired AV Input from the displayed colour bars for the AV Input by pressing the corresponding colour button ∧ (red), DATE+ (green), ON+ (yellow) or OFF+ (blue) on the remote control.

C

❶ Set the VCR/TV switch to "TV".

❷ Press the AV button.
The last previously selected AV Input indication appears on the TV screen.
The indications for selecting another AV Input also appear, but they disappear a few seconds later.

❸ Before the indications for selecting another AV Input disappears, press the ∨ button, DATE− button, ON− button or OFF− button to select the desired AV input.
With the following four buttons, you can move and select as follows:

| | |
|---|---|
| ∨: | Move left |
| DATE−: | Move down |
| ON−: | Move up |
| OFF−: | Move right |

# Glossary

## PDC (Programme Delivery Control)

**What is PDC?**
PDC is a special signal transmitted by certain TV stations together with the normal TV signal. This signal ensures that a TV programme which has been programmed for timer recording will be recorded precisely from beginning to end, even if it is delayed or extended compared to the published broadcasting time. Furthermore, if a programme is interrupted by a news flash, etc., the timer recording is also interrupted, and resumes when the programme restarts.

**How to Use PDC?**
(1) This VCR detects whether or not a TV station transmits PDC signal at the time of tuning only, and it stores this information in its memory.
If a TV station introduces or discontinues PDC transmissions later on, tuning must be performed again to update the VCR's memory.
(2) When you use VIDEO Plus+ PlusCode for timer programming, the PDC mode is automatically set to "OFF" even if the station has been memorized by the VCR as having PDC transmission.
(3) When you use VIDEO Plus+ PlusCode for timer programming for a TV station that has been memorized by the VCR as not having PDC transmission, the PDC mode is automatically set to "---" (no PDC).
(4) To perform PDC recording for a TV station that transmits PDC signals, set the PDC mode to "ON" and ensure that the start time is set exactly to the time published, for example, in newspapers, magazines, etc. If that is set correctly, the timer recording does not start.

**Notes on PDC Recording:**
(1) PDC recording will start several seconds before the broadcast programme commences and may stop several seconds before or after the end of the programme, depending on the control from the TV station.
(2) Normally, the programming date for a timer recording is automatically cancelled as soon as the recording is completed.
Under the following conditions, however, the programmed timer recording data will automatically be cancelled at 4 a. m. of the next day.
(a) When the VCR performs normal timer recording (without PDC control) because the PDC signal cannot be detected during PDC timer recording.
(b) When a timer recording is incomplete due to insufficient tape or cancellation by the user.
(c) If the TV station transmits a PDC signal to suspend or interrupt the recording.

In these cases, the VCR remains in the timer recording standby mode after the timer recording has been stopped.

(3) If "PDC" is manually set to "ON" for a TV station which does not transmit a PDC signal, the VCR performs normal timer recording (without PDC control).

(4) If several timer recordings have been programmed, the VCR periodically checks, when it is in the timer recording standby mode, the PDC status of programmed TV stations with PDC for any change in the start time of these programmes. However, while the VCR is actually recording a programme, it can only check the PDC status of the programme being recorded.

(5) If the actual broadcasting times of timer recordings overlap (regardless of whether or not they are PDC-controlled), the recording that starts first always has priority, and the recording of the later programme starts only after the first timer recording has finished.

(6) Some TV stations may send signals to your VCR which will change the time or date etc. for a timer recording that you have programmed with PDC. The signal automatically updates the timer programme to record at the re-scheduled time and date. When this happens, the PDC status indicator changes to "ON✳". Although it is not possible to alter the timer programme once this has happened, it is still possible to delete the programme completely, if you wish to.

(7) If the name of a TV station has been changed by manual channel setting (Manual Tuning), the programmed recording may not be performed correctly even if you have set the PDC mode to "ON" during programming.

At present, PDC transmission does not cover all areas and TV stations in the UK, so please check with the broadcasters in your area for details.

## One Touch Recording (OTR)

You can use this function to set the duration of a recording. When the selected recording duration has elapsed, the VCR automatically stops recording and switches off.
This function is convenient when you have to go out or want to go to bed before the recording ends.

# Glossary Continued...

## Q Link Function

This function works only if the VCR is connected via a fully-wired 21-pin Scart cable to a TV featuring the Q Link or similar function.
Q Link offers the following functions:

(1) Download from the TV
When you connect the VCR to a TV, the station list data is automatically copied from the TV to the VCR, and the TV stations are assigned to the programme positions on the VCR in the same order as on the TV.

(2) Direct TV Recording
By simply pressing the DIRECT TV REC button, you can at once record the same programme that you are watching on the TV.

*(3) TV/VCR Auto Power On
Even if the TV and the VCR are off (standby mode), pressing the Play (▷), VIDEO PLUS+ or PROG./CHECK button automatically turns on both the TV and the VCR.
- When a cassette with a broken erasure prevention tab is in the VCR, it turns on and starts playback. The TV also turns on.

*(4) VCR Auto Power Off
When you turn the TV off, the VCR is turned off as well. However, this function only works during rewinding, in the stop mode, or when no cassette is inserted.
If the VCR receives the Auto Power Off command while it is rewinding the tape, it turns off after the rewinding has been finished.
This function does not work during the following operations:
Preset Download, Auto Setup, Auto Clock Setting and Manual Tuning.

*(5) On Screen Display Messages
Even when you are watching a TV programme, the following VCR message appears on the TV screen when a timer recording starts:
"This programme has already started"
- Depending on the type of TV used, the above message may not appear correctly.

* The above operations marked with asterisk are only available if the VCR is connected to a TV featuring the Q Link or the DATA LOGIC function.

## Video Index Search System (VISS)

A special index signal is automatically recorded at the start of each recording.
It can be used to quickly and easily find the beginning of desired programmes. After the VCR has wound the tape to the beginning of the desired programme, playback starts automatically.

**Index Signals Are Automatically Recorded in the Following Cases:**
- When you start a recording by pressing the REC button, REC/OTR button, or DIRECT TV REC button.
- When a timer recording starts.
- When you press the REC button on the remote control during a recording.

## On Screen Display (OSD)

When operating this VCR, an indication of the activated VCR function is shown on the TV screen. When "OSD" on the Display menu is set to "ON", the automatic display of these indications can be activated or cancelled by pressing the OSD/DISPLAY button.

## Crystal View Control (CVC)

The crystal view control function ensures that you always obtain the optimum picture quality so that you get the best picture automatically.
While the VCR is turned on, the CVC indication is always displayed to show that the Crystal View Control is activated.

## NICAM Broadcasting System

This VCR features the NICAM digital sound system, a 2-channel sound broadcast system that provides either 2 high-quality stereo sound tracks or 2 independent mono sound tracks, M1 and M2.
NICAM programmes are always accompanied by standard (mono) sound broadcasts, and during playback, you can select the desired sound with the AUDIO button.
- The NICAM stereo sound can only be recorded on the hi-fi audio tracks.
- If, for some reason, you want to record a NICAM TV programme intentionally in mono on the hi-fi audio tracks, set "Nicam" to "OFF" for the programme position on which the desired programme is broadcast, as described on page 44.

**Important Note on the NICAM System**
When this VCR is switched on, the tuner automatically switches to a NICAM broadcast if NICAM is being transmitted. During test transmissions, it is possible that the sound received does not correspond to the picture being viewed. In order to receive synchronised sound and picture, select monaural sound with the AUDIO button or Nicam OFF setting. This applies only until NICAM transmissions are fully operational.
At present, the NICAM signal is transmitted on stereo channels only, since the M1 and M2 formats are not yet available.

# Glossary Continued...

## Channel, Programme Position and Other Confusing Terms

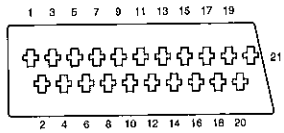
TV Station: Television broadcasting station
Station Name: The name of a TV broadcasting station
TV Channel: The actual channel (frequency) on which a broadcasting station transmits TV programmes
Programme Position:
The number on which a TV station is programmed so that it can be selected with the Numeric buttons on the remote control. This VCR has 99 programme positions.

## Recording Speed SP/LP

SP stands for Standard Play. In this mode, recording or playback is possible for the duration indicated on the cassette.
LP stands for Long Play. In this mode, the recording or playback duration is double of that indicated on the cassette, however, the picture quality is slightly inferior to that of the SP mode.

## 21-pin Scart Socket

The 21-pin Scart socket transmits both input and output signals for picture and sound. TVs equipped with the same type of socket can be connected here.
This type of socket is also called, Peritel, Euro Connector and Euro AV.




**AV1 Scart Socket (for Q Link connection)**

| | | | |
|---|---|---|---|
| 1 | Audio output CH2 (R) | 12 | No connection |
| 2 | Audio input CH2 (R) | 13 | Red ground |
| 3 | Audio output CH1 (L) | 14 | Blanking ground |
| 4 | Audio ground | 15 | Red |
| 5 | Blue ground | 16 | Blanking |
| 6 | Audio input CH1 (L) | 17 | Video output ground |
| 7 | Blue | 18 | Video input ground |
| 8 | Switching voltage | 19 | Video output |
| 9 | Green ground | 20 | Video input |
| 10 | Q Link data | 21 | Ground |
| 11 | Green | | |

**AV2 Scart Socket**

| | | | |
|---|---|---|---|
| 1 | Audio output CH2 (R) | 12 | Reserved |
| 2 | Audio input CH2 (R) | 13 | Red ground |
| 3 | Audio output CH1 (L) | 14 | Blanking ground |
| 4 | Audio ground | 15 | Red |
| 5 | Blue ground | 16 | Blanking |
| 6 | Audio input CH1 (L) | 17 | Video output ground |
| 7 | Blue | 18 | Video input ground |
| 8 | Switching voltage | 19 | Video output |
| 9 | Green ground | 20 | Video input |
| 10 | Control signal | 21 | Ground |
| 11 | Green | | |

The Red, Green and Blue (RGB) video signals are looped through only from an external source unit, for example from a connected a pay-TV decoder, i.e. they are not from tape playback.

## Tracking Adjustment

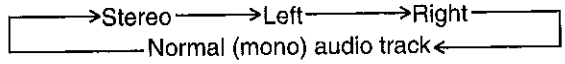
As this VCR is equipped with automatic digital tracking adjustment function which maintains optimum picture quality, manual adjustment is normally not necessary.
However, when playing back a video cassette which was recorded on a different VCR, the playback picture may contain noise bars. You can then use the manual tracking adjustment function to eliminate the noise.

## V-Lock Adjustment

V stands for Vertical. With this function, you can minimise vertical jitter during still playback.

## Selecting the Desired Playback Sound Track

You can select the desired playback sound tracks with the AUDIO button on the remote control. Repeatedly pressing the AUDIO button changes the audio output mode in the following order:




The L (left) and R (right) indications show which sound mode is selected:
Stereo: Both the L and R indications are displayed.
Left: The L indication alone is displayed.
Right: The R indication alone is displayed.
Normal: Neither the L nor the R indication is displayed.

# Before Requesting Service

Before requesting service, please check the following points.

## ◆ On Screen Display Messages

The error messages are given in brackets [ ].

[Please insert video tape !]

☞ You pressed the REC button (REC/OTR button), the DIRECT TV REC button, the Play button (▷), the Fast Forward button (▶▶) or the Rewind button (◀◀) when no cassette was inserted in the VCR.
Insert a video cassette.

[Please use tape with unbroken recording tab !]

☞ You pressed the REC button (REC/OTR button) or the DIRECT TV REC button when a cassette with a broken out erasure prevention tab was inserted in the VCR.
Insert a video cassette with an intact erasure prevention tab on which recording is possible.

[This action is not possible before time and date are set]

☞ You pressed the VIDEO PLUS+ button or the PROG./CHECK button, even though the time and date have not yet been set on the VCR.
Set the time and date.

[No timer programmes to be done !]

☞ You pressed the TIMER REC button even though no timer recording has been programmed.
Programme a timer recording before pressing the TIMER REC button.

[Please put VCR into stop mode first]

☞ You attempted to change the contents of the timer programming while a timer recording was being performed.
Put the VCR into the stop mode first.

> Other messages may also appear.
> Follow the instructions given on the TV screen.

## ◆ Self-diagnosis Indications

This VCR has a built-in self-diagnosis function. If it detects some problem during installation or during use, the following kind of indications automatically appear in the VCR display. These indications take the form of a letter followed by a 2-digit number (e.g. [H01]).

**Indication**
H□□
F□□
↓
**Cause**
A problem has occurred.
(The 2-digit number after H or F differs according to the problem which is causing the trouble.)
↓
**How to remedy**
Write down this self-diagnosis number and tell it to your dealer.

## ◆ The VCR Does Not Work Correctly.

The symptom descriptions are given between quotation marks " ".

"The VCR display is not illuminated."

☞ The AC mains lead is disconnected.
Connect the AC mains lead securely.

"The VCR display is illuminated, but the VCR cannot be operated."

☞ The VCR is in the timer recording standby mode.
Press the TIMER REC button to cancel the standby mode.

☞ Safety devices are operating.
Disconnect the AC mains lead and wait approximately 1 minute before reconnecting.
Then check if the VCR can be operated.

"The VCR picture does not appear on the TV screen."

☞ The RF output channel is set to [−−].
Change the RF output channel to a channel other than [−−].

"Auto clock setting does not work correctly."

☞ Teletext information is not available or cannot be read.
Set the clock manually.

"Download cannot be performed."

☞ The VCR is not connected to a TV equipped with the Q Link (or a similar) function via a fully-wired 21-pin Scart cable.
Be sure to use a fully wired 21-pin Scart cable to connect the VCR to a TV with the Q Link (or a similar) function.

## ◆ Playback Does Not Work Properly.

The symptom descriptions are given between quotation marks " ".

"The playback picture is distorted or in black and white. Or, horizontal noise bars appear in the picture or horizontal lines move up and down."

☞ The tracking adjustment is not correct.
Adjust the tracking. (See page 57.)

☞ The TV's video playback channel has not been tuned correctly.
Re-tune the video playback channel.

☞ The video heads are clogged or worn.
Consult your dealer for advice.

☞ The playback picture is distorted when using an E300 type video cassette that was recorded in the LP mode.
We recommend that you use video cassettes other than type E300.

# Before Requesting Service Continued...

## ◆ Recording Is Not Possible or Does Not Work Properly.

The symptom descriptions are given between quotation marks " ".

"When recording is attempted, the ⊙⊙ indication flashes."

☞ A video cassette with a broken out erasure prevention tab is used.
Use a cassette with an intact tab, or if you want to erase the previously recorded contents on the cassette, cover the tab hole with two layers of adhesive tape.

"The playback picture of a recorded programme is distorted or no picture can be seen."

☞ The aerial or aerial lead connection is defective.
Check the connections. If the picture displayed on the TV is also distorted, there is something wrong with the installation of the aerial.

☞ No programme was recorded because the VCR is not tuned correctly.
Tune it correctly.

☞ No programme was recorded because the AV input (A1or A2) was selected on the VCR.
Select the programme position of the desired TV programme.

"Timer recording does not work correctly."

☞ Time and date are not set or they are set incorrectly.
Set the time and date correctly.

☞ The starting time or ending time of the timer recording were not programmed correctly.
Set the starting time or ending time correctly.

☞ The VCR was not put in the timer recording standby mode.
After programming a timer recording, press the TIMER REC button to put the VCR in the timer recording standby mode.

"Recording from an external source connected to the VCR's AV input cannot be made."

☞ The correct AV input (A1or A2) is not selected.
Select the correct AV input (A1or A2).

☞ The connections from the external source are not made correctly. Correct them.

## ◆ The Remote Control Does Not Work Correctly.

The symptom descriptions are given between quotation marks " ".

"The remote control does not work correctly."

☞ The remote control signal cannot reach the VCR.
Aim the remote control at the VCR and make sure that the infrared beam's path is not obstructed.

☞ The distance to the VCR is too long.
Use the remote control within 7 metres from the VCR. If you are using it within this range but the remote control still cannot operate the VCR, replace the batteries.

☞ The batteries are exhausted.
Replace with new batteries.

☞ The batteries have been inserted with reversed polarities (⊕/⊖).
Insert the batteries correctly. (See page 4.)

## Adjusting the Playback Picture

Under normal conditions, the VCR automatically adjust the playback picture for optimum quality. However, in some cases it may be necessary to adjust it manually.

**If the Picture Contains Noise Bars and It Is Not Clear to See (Tracking adjustment):**
If noise bars appear during normal playback, slow playback or still playback, follow the operations below.

During normal or slow playback, press the Channel button ∨ (−) or ∧ (+) until the bars noise disappear.
- If the noise bars appear during still playback, switch the VCR over to the slow playback mode and then adjust the tracking as explained above.

TV screen

Playback picture containing noise bars

**To Return to Auto Tracking:**
Press the Channel buttons ∨ (−) and ∧(+) simultaneously.

**If the Still Picture Scrolls Up or Down (V-Lock Adjustment):**
If the still picture scrolls up or down, perform the following operations:

During still playback, keep the Channel button ∨ (−) or ∧ (+) pressed until the picture stops scrolling.

**Precautions:**
- With certain TV models and tapes, it may not be possible to adjust the tracking.
- If you play back a cassette that was recorded on another VCR, the picture quality may be inferior and it may be necessary to adjust the tracking. Also, on some TVs, the picture may scroll up and down in the special playback functions.
  However, these are not malfunctions.

# Cautions

Please read these cautions before you operate this VCR.

### Avoid Sudden Changes in Temperature

If the VCR is suddenly moved from a cold place to a warm place, condensation may form on the tape and inside the VCR. If this happened, leave the VCR to at room temperature.

### Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

### Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

### Keep away from High Temperature

Keep the VCR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

### Avoid Magnets or Magnetized objects

Never bring a magnet or magnetized object near the VCR because it will adversely affect the performance of the VCR. Keep the VCR away from other equipment as much as possible when using it, to avoid any adverse effect on performance for both the VCR and the equipment.

### No Fingers or Other Objects Inside

Touching internal parts of this VCR is dangerous, and may cause serious damage to the VCR. Do not attempt to disassemble the VCR. There are no user serviceable parts inside.

### Keep Water away

Keep the VCR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VCR, serious damage could occur. If you spill any liquid into the VCR, consult qualified service personnel.

### Cleaning the VCR

Wipe the VCR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

### Stacking

Place the VCR in a horizontal position, and do not place anything heavy on it.

### Video Head Clogging

The video heads record picture signals on the tape during recording and read picture signals from the tape during playback and they are, therefore, of critical importance for the picture quality. If the VCR is used over long periods of time, these heads may become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptoms occurs have the recorder checked by qualified service personnel.

**Head cleaning by a service agent is not coverd by warranty.**

### Condensation may form in the VCR if:

- The VCR is in a room where the heater has just been turned on.
- The VCR is in a room with steam or high humidity.
- The VCR is brought from cold surroundings into a well-heated room.
- The VCR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

**Note:**
Do not operate the VCR for at least 1 hour if any of the above conditions occur.
This VCR does not incorporate a condensation sensor.

### Tape Care

Some do's and dont's on tape care.

**DO**:
1) Use a good quality branded tape, such as Panasonic.
2) Keep in the box supplied with your tape, or a video case, when not in use.
3) Try to use all the tape on a cassette by making middle and end sections. This will avoid many repeated recordings at the beginning of the tape resulting in premature wear.
4) Take care to insert a tape correctly into the VCR to avoid damage.

**DO NOT:**
1) Expose the tape to high humidity or temperature.
2) Expose to liquid.
3) Expose to dust particles by storing directly on a carpet for example.
4) Use a damaged tape or attempt to repair.
5) Dismantle the cassette housing.
6) Attempt to lift the front cassette flap or touch the tape surface.

# Specifications

**NV-HD640B...(U.K. model)**
**NV-HD640BL...(EIRE model)**

| | |
|---|---|
| **Power Source:** | 220-240 V AC 50/60 Hz |
| **Power Consumption:** | 21 W |

| | | | |
|---|---|---|---|
| **Video Recording System:** | 2 rotary heads, helical scanning system | | |
| **Video Heads:** | 4 heads | | |
| **Audio Heads:** | 2 heads (Hi-Fi) | | |
| **Tape Speed:** | SP; 23.39 mm/s | | |
| | LP; 11.7 mm/s | | |
| **Tape Format:** | VHS tape | | |
| **Record/Playback Time:** | SP; 240 min with NV-E240 | | |
| | LP; 480 min with NV-E240 | | |
| **FF/REW Time:** | approx. 60 s with NV-E180 | | |
| **VIDEO** | | | |
| **Television System:** | CCIR; 625 lines, 50 fields, PAL colour signal | | |
| **Modulation System:** | Luminance; FM azimuth recording | | |
| | Colour signal; converted subcarrier phase shift recording | | |
| **Input Level:** | AV1/AV2; | 1.0 Vp-p, | 75 ohm, terminated |
| **Output Level:** | AV1/AV2; | 1.0 Vp-p, | 75 ohm, terminated |
| | RF Modulated; (U.K. model) | UHF channel (21-68), | 75 ohm |
| | (EIRE model) | UHF channel (21-68), | 75 ohm |
| **AUDIO** | | | |
| **Input Level:** | AV1/AV2; | −6 dBV, | more than 10 kohm |
| **Output Level:** | AV1/AV2; | −6 dBV, | less than 1 kohm |
| | AUDIO OUT (PHONO); | −6 dBV, | less than 1 kohm |
| **Audio Track:** | 1 track (Normal-mono only), 2 channels (Hi-Fi sound-stereo) | | |
| **Video Horizontal Resolution:** | Colour; more than 240 lines (SP) | | |
| **Signal-to-Noise Ratio:** | Video; more than 43 dB (SP) | | |
| **Dynamic Range:** | Audio: more than 90 dB (Hi-Fi audio track) | | |
| **Audio Frequency Response:** | 20 Hz−20 kHz/Hi-Fi | | |
| **Wow and Flutter:** | 0.005% Wrms/Hi-Fi | | |
| **Operating Temperature:** | 5°C−40°C | | |
| **Operating Humidity:** | 35%−80% | | |
| **Weight:** | 4 kg | | |
| **Dimensions:** | 430 (W)×87 (H)×300 (D) mm | | |
| **Standard Accessories:** | 1 pc. RF Coaxial Cable | | |
| | 1 pc. Remote Control | | |
| | 2 pcs. "R6" size batteries | | |
| | 1 pc. AC mains lead | | |

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

[D]

**Matsushita Electric Industrial Co., Ltd.**
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